

## 1987 Regional Population and Employment Forecast

Adopted October 14, 1987

Revised January 13, 1988

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# **1987 Regional Population and Employment Forecast**

**Adopted October 14, 1987  
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**Prepared by  
Association of Monterey Bay Area Governments**

Preparation of this report was financed in part through grants from the U.S. Department of Transportation - Federal Highway Administration under the Surface Transportation Assistance Act of 1982, as amended.

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**April 1988**

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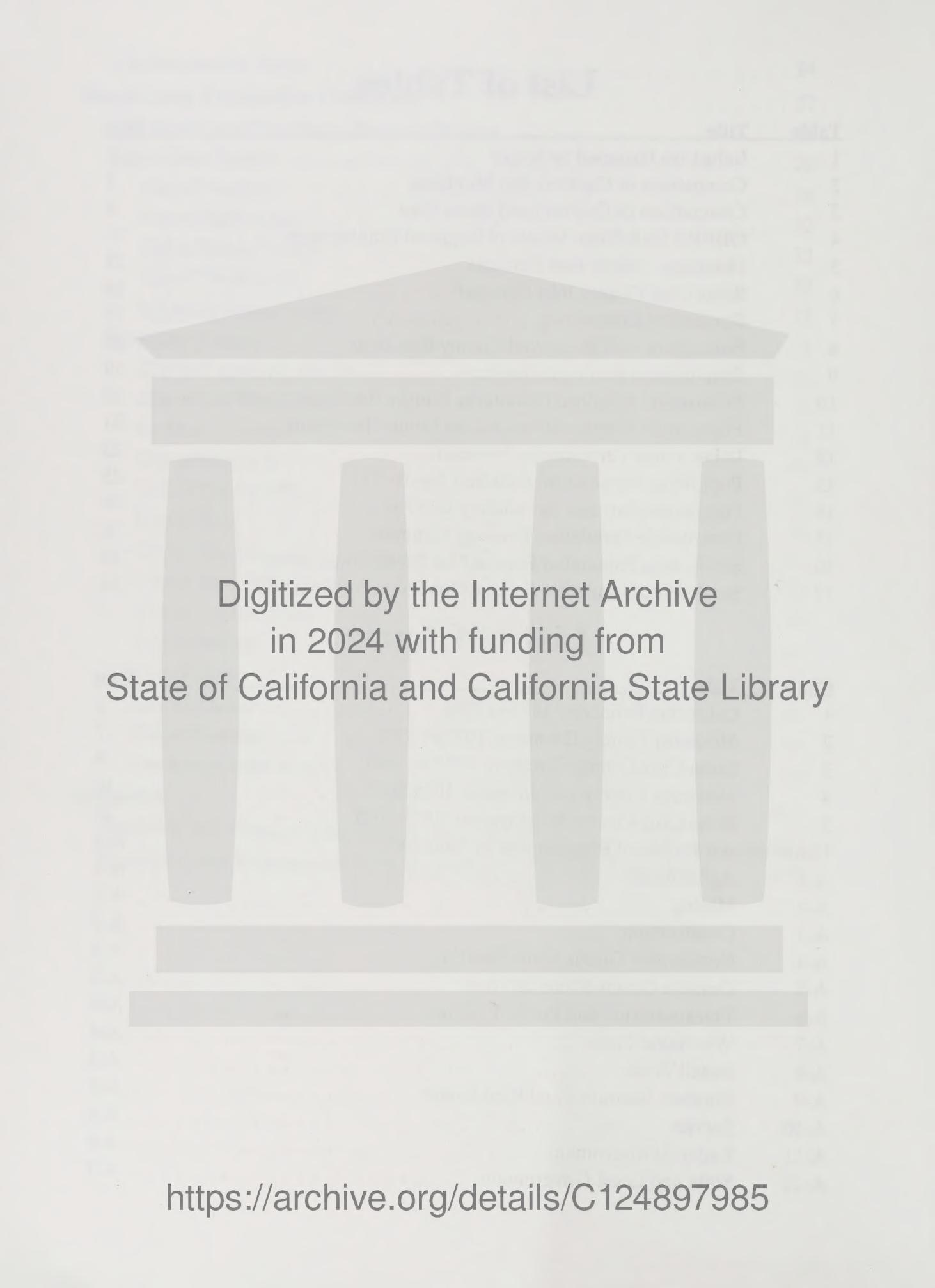
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# Executive Summary

## Introduction

As the regional planning agency for Monterey and Santa Cruz Counties it is AMBAG's responsibility to produce plans related to air quality, transportation and housing. The basic data set for all of these plans are forecasts of population and employment. The jurisdictions in the AMBAG region also have need of forecasts produced at the local level which take into account detailed knowledge of the social,

economic, demographic, policy and land use characteristics of each locality. At the January 1987 meeting the AMBAG Board of Directors instructed staff to begin work on revised employment and population forecasts for the region.

## The Employment Forecasts

The Employment Forecasts for the AMBAG Region were produced using a shift-share model of regional employ-

### Forecast of Employed Monterey County Residents

	Historical Data			Employment Forecasts			
	1975	1980	1985	1990	1995	2000	2005
Agriculture	18,700	21,700	25,000	24,800	24,300	23,600	22,900
Mining	700	400	400	400	300	300	300
Construction	4,600	5,600	6,100	6,800	7,600	8,500	9,500
Manufacturing- Nondurable	7,900	6,900	6,800	6,600	6,600	6,600	6,600
Manufacturing- Durable	2,700	3,600	4,400	5,700	7,000	7,900	8,800
Transportation and Public Utilities	5,100	5,900	5,800	5,600	5,700	5,900	6,200
Wholesale Trade	3,400	4,200	4,400	5,000	5,600	6,200	6,800
Retail Trade	16,300	20,700	25,800	30,400	35,500	39,600	43,800
Finance, Insur. & Real Estate	4,500	6,200	6,700	8,400	9,500	10,600	11,600
Services	15,500	20,700	25,400	29,900	34,800	38,900	43,000
Federal	6,600	7,300	7,900	9,000	9,700	10,100	10,400
Government							
Military (active duty)	19,500	20,500	23,100	24,500	24,500	24,500	24,500
State and Local Government	14,600	16,600	17,200	19,400	20,800	21,500	22,800
Total	120,100	140,300	159,000	176,500	191,900	204,200	217,200

Source: Historical Data: Annual Planning Information Salinas-Seaside-Monterey MSA 1987-88 Employment Development Department

## Forecast of Employed Santa Cruz County Residents

	Historical Data			Employment Forecasts			
	1975	1980	1985	1990	1995	2000	2005
Agriculture	4,600	5,800	6,800	7,000	7,200	7,400	8,000
Mining	100	100	100	100	100	100	100
Construction	3,600	5,700	7,100	7,500	8,100	8,500	8,800
Manufacturing- Nondurable	4,100	5,900	5,000	5,000	4,800	4,600	4,600
Manufacturing- Durable	5,700	8,300	15,300	17,300	19,300	21,000	23,300
Transportation and Public Utilities	4,100	4,400	4,100	4,100	4,300	4,500	4,500
Wholesale Trade	2,100	2,900	4,600	5,300	5,900	6,500	7,200
Retail Trade	11,300	16,100	19,400	22,300	25,100	27,700	30,000
Finance, Insurance & Real Estate	2,900	4,700	5,600	6,500	7,200	8,200	8,900
Services	10,700	15,200	18,800	22,100	24,700	26,800	28,400
Federal Government	500	600	600	600	700	700	700
State and Local Government	12,600	15,000	16,100	17,000	17,800	18,600	19,200
Total	62,300	84,700	103,500	114,800	125,200	134,600	143,700

Source: Historical Data: Annual Planning Information Santa Cruz MSA 1987-88 Employment Development Department

ment for 12 sectors of the economy. The forecasts for Monterey and Santa Cruz Counties are depicted above and on the previous page.

It is anticipated that the next twenty years will see a gradual shift in employment patterns in the region. Historically, the strongest employment sectors in Monterey County have been agriculture, military and retail trade. In Santa Cruz County they have been retail trade, services, and state and local government. Three main employment trends can be expected in the region in the next twenty years. Agriculture will decline in importance throughout the region as an employer. It is anticipated that agricultural employment will decrease in Monterey County from

25,000 in 1985 to 22,900 in 2005 and increase slowly in Santa Cruz County from 6,800 in 1985 to 8,000 in 2005. At the same time, durable goods manufacturing will increase rapidly in both counties. In Monterey County durable goods manufacturing employment will increase from 4,400 in 1985 to 8,800 in 2005. In Santa Cruz County growth is expected from 15,300 in 1985 to 23,300 in 2005. The third trend in employment will be strong growth in retail trade and services. Continuing the pattern started in the 1970s retail trade and services will grow faster than any other sector of the economy. In Monterey County in 1985 employment was 25,800 in retail trade and 25,400 in services. By 2005 employment will have increased to 43,800 in retail trade

## AMBAG Region Population Forecast

	1980 <sup>1</sup>	1990	1995	2000	2005
<b>Monterey County</b>					
Carmel-by-the-Sea	4,707	5,160	5,470	5,740	6,070
Del Rey Oaks	1,557	1,840	1,840	1,840	1,840
Ft. Ord <sup>2</sup>	22,420	30,460	32,124	32,124	32,124
Gonzales <sup>3</sup>	2,891	5,180	5,600	6,020	6,020
Greenfield <sup>3</sup>	4,181	7,290	8,150	8,466	8,488
King City <sup>3</sup>	5,495	8,581	11,536	13,176	14,443
Marina <sup>4</sup>	20,669	34,333	37,840	42,613	47,253
Monterey <sup>5</sup>	27,558	33,758	34,920	37,070	39,067
Pacific Grove	15,751	16,840	17,330	18,839	19,930
Salinas <sup>3</sup>	80,479	102,627	113,860	122,530	134,610
Sand City	182	337	623	836	1,057
Seaside <sup>6</sup>	36,567	40,459	41,930	42,370	42,980
Soledad <sup>3</sup>	5,928	8,090	9,150	9,331	9,519
Unincorporated	83,914	103,095	112,251	119,269	126,963
<b>TOTAL</b>	<b>290,444</b>	<b>367,590</b>	<b>400,500</b>	<b>428,100</b>	<b>457,700</b>
<b>Santa Cruz County</b>					
Capitola	9,095	10,218	10,625	10,964	11,307
Santa Cruz <sup>7</sup>	41,483	49,525	53,721	57,994	61,940
Scotts Valley	6,891	9,562	11,560	13,066	13,379
Watsonville <sup>8</sup>	33,534	44,573	52,417	56,232	58,649
Unincorporated	97,138	122,222	132,578	141,644	152,325
<b>TOTAL</b>	<b>188,141</b>	<b>236,100</b>	<b>260,900</b>	<b>279,900</b>	<b>297,600</b>

<sup>1</sup>1980 Census Data

<sup>2</sup>Ft. Ord provided for comparison only; on-base population included with Marina and Seaside

<sup>3</sup>Includes city sphere of influence

<sup>4</sup>Marina forecast includes city sphere of influence and on-base population at Ft. Ord

<sup>5</sup>Monterey forecast includes Presidio of Monterey and Naval Postgraduate School

<sup>6</sup>Seaside forecast includes on-base population at Ft. Ord

<sup>7</sup>Santa Cruz City forecast includes on-campus population for University of California

<sup>8</sup>Watsonville forecast includes sphere of influence and remainder of city planning area

and 43,000 in services. In Santa Cruz County in 1985 employment was 19,400 in retail trade and 18,800 in services. By 2005 employment will have increased to 30,000 in retail trade and 28,400 in services. Overall employment will in Monterey County increase from 159,000 in 1985 to 217,200 in 2005 and in Santa Cruz County from 103,500 in 1985 to 143,700.

### Population Forecasts

The second step in the socio-economic forecast process is the preparation of the county-wide population forecasts for both Monterey and Santa Cruz Counties. The table above depicts the population forecasts for each of the cities and county unincorporated areas of the AMBAG region. The population forecast takes into consideration

three groups of people: those who move to the AMBAG region for employment (adults age 18 - 64 years), those who move here because they are a dependent of an employed person (children 0 - 17 years), and retired adults (age 65 and over). After preparation of the county-wide population forecasts the third major step in the socio-economic forecast process is

the preparation of small area population forecasts for each of the cities and census tracts in the AMBAG region. This was done using general plan policies, the availability of vacant land, and past rate of growth as indicators of future development. At the same time the total of the small area forecasts was controlled to the county-wide population forecasts.





# Introduction

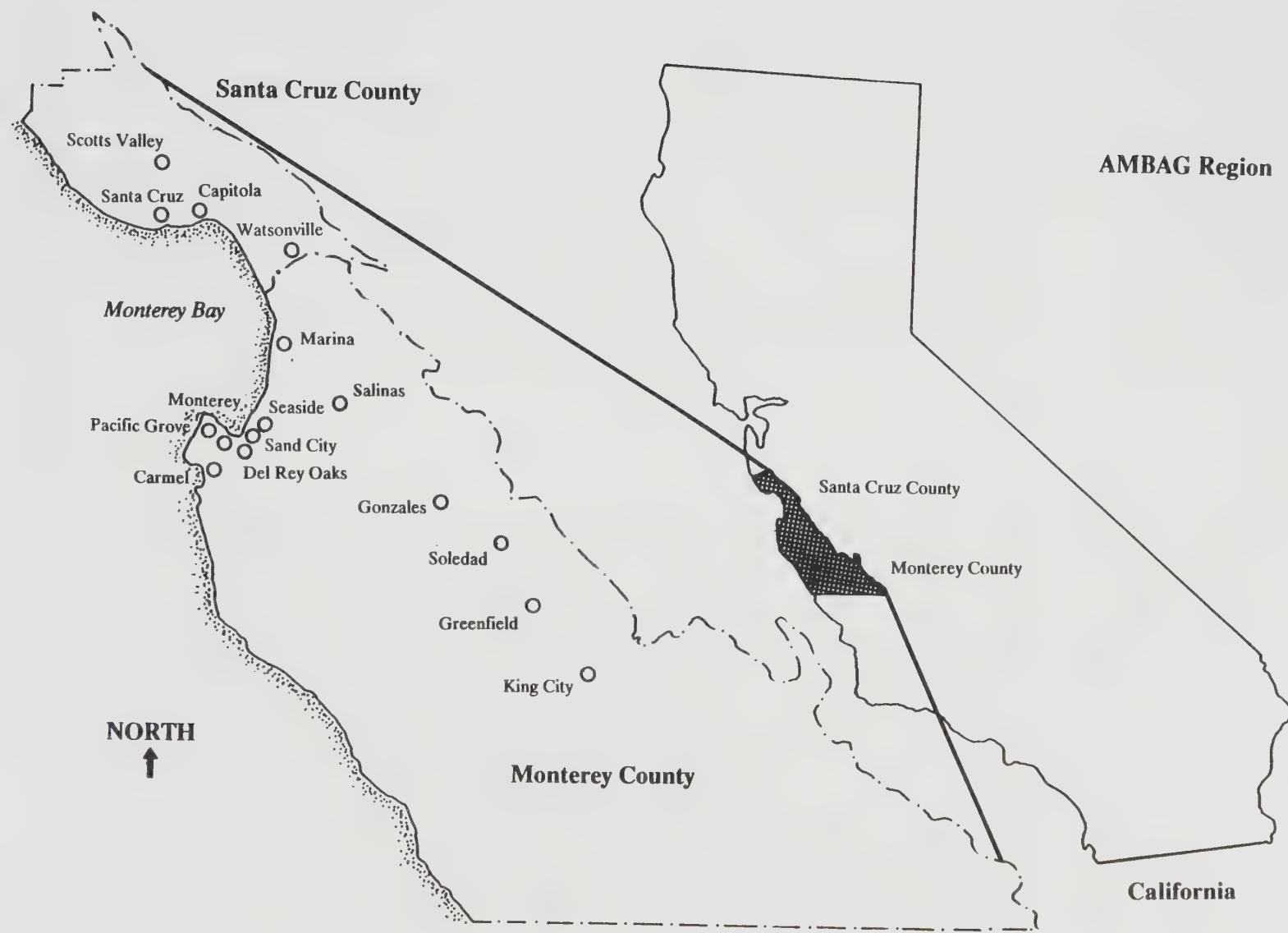
As the regional planning agency for Monterey and Santa Cruz Counties it is AMBAG's responsibility to produce a number of plans related to air quality, transportation and housing. One of the basic data inputs to each of these plans is forecasts of population and employment. The jurisdictions in the AMBAG region also have need of forecasts produced at the local level which take into account detailed knowledge of the policies and issues of the area. To meet these needs, AMBAG produces regional population and employment forecasts. The first set of forecasts were produced in 1979 and the second in 1983. At the January 1987 meeting the AMBAG Board of Directors instructed staff to begin work on an updated and revised set of socio-economic forecasts. The first chapter describes the results of the first step in that process, the employment forecast. It provides an overview of the AMBAG Socio-economic Forecast process and describes in detail the countywide employment forecasts. The second chapter presents the countywide population forecasts and the third chapter the breakdown of the countywide population forecasts to individual cities, city spheres of influence and census tracts.

Some will view these forecasts as too high, while others will view them as too low. Either case may be correct. Preparation of these forecasts does not imply any judgment on the part of AMBAG staff or Board of Directors on what level of population or employ-

ment in the future will be "best" in the AMBAG region or any part of it. Rather, the purpose of this report is to provide population and employment forecasts for regional planning uses and to provide a local alternative to forecasts produced by state and federal agencies.

## THE SOCIO-ECONOMIC FORECAST PROCESS

AMBAG's socio-economic forecasting process begins by recognizing that there exist three broad groups of people. These are working age adults (age 18 - 64), children (age 0 - 17) and retired adults (generally age 65 +). Each of these groups moves to the AMBAG region for different reasons. Working age adults generally make their location decisions based on employment. Dependent children are here as the result of the location decisions made by their parents. Retired adults decide on location by looking at many factors such as quality of life, cost of living, climate and others. Two of these major groups - working age adults and dependent children - locate within the AMBAG region because of employment. Based on this analysis, the update of the socio-economic forecasts began with a forecast of employment for the two counties of the AMBAG region. Then using data from the employment forecast and birth and mortality data from the State Department of Health, a county wide population forecast was prepared for each of the three age groups. After preparation of the county wide population forecast the third



step in the process is to breakdown the countywide population forecast to individual cities, city spheres of influence, unincorporated county areas and census tracts. This was done using vacant land information, general plan

data and an analysis of infrastructure constraints on development. The disaggregation process was carried out by AMBAG staff in close cooperation with staff representatives from the cities and counties.







# Regional Employment Forecasts

## TRENDS IN CALIFORNIA AND THE REGION

The counties of the AMBAG region do not stand as independent economic entities but as parts of the larger entity, the state of California. A highly complex interrelationship exists between the region and the state. The model used in the regional employment forecast is one which uses historical data to determine the relationship between the regional and state economies. The following section of the report describes the changes which have taken place in the economies of both California and the AMBAG region from 1975 to 1985. To facilitate that the economy has been summarized in 13 broad industrial groupings. Table 1 on the following page describes the particular types of businesses included in each industrial grouping. These descriptions are based on the 1972 Standard Industrial Classification Manual.

### California

The period from 1975 to 1985 has shown a continuation of the movement started in the 1960s from a manufacturing based economy and towards a post-industrial economy based on services and retail sales. Chart 1 on page 6 compares the state economy in 1975 and in 1985. In 1975 the most important sectors of the economy were government (20.47% of total employment), manufacturing of all types (19.53% of total employment) and services (19.26%). By 1985 the most important sectors of the

state-wide economy were services (23.34% of total employment), manufacturing of all types (18.49%) and retail sales (17.21%). Government had fallen to 15.88% of total state-wide employment. Other sectors of the economy showed little relative change during the 10 year time period.

### Monterey County

Chart 2 on page 6 and Table 2 on page 7 summarize California and Monterey County employment in 1975 and 1985. In general, employment patterns in Monterey County are significantly different from those for the state. In 1975 the most important sector of the county economy was government with 22.81% of total employment. This was followed by agriculture with 20.12%, retail with 16.47% and services with 15.82%. By 1985 practically equal shares of employment went to agriculture (20.00%) and government (20.08%) with retail at 19.36% and services at 19.28%. The importance of agriculture in the county economy can be accounted for by the status of the Salinas Valley as one of the top agricultural production areas in the country. Most of the difference between government employment at the state level and in the county is due to the presence of many federal employees at Ft. Ord, Navy Postgraduate School and the Defense Language Institute.

Another important difference in employment patterns between Monterey County and the State is the difference in manufacturing employment. In 1975 the percentage of non-

durable manufacturing in Monterey County was similar to the state (7.97% Monterey County, 6.68% California).

However, there was a great difference in durable goods manufacturing (1.94% Monterey County, 12.85% California).

## Table 1 Industries Grouped by Sector

### AGRICULTURE

- Agriculture Production - Crops
- Agriculture Production - Livestock
- Agriculture Services Forestry
- Fishing, Hunting and Trapping

### MINING

- Metal Mining
- Anthracite Mining
- Bituminous Coal and Lignite Mining
- Oil and Gas Extraction
- Mining and Quarrying of Nonmetallic Minerals, except Fuels

### CONSTRUCTION

- This major group includes establishments primarily engaged in construction. Three broad types of construction activity are covered: (1) building construction by general contractors; (2) other construction by general contractors; and (3) construction by special trade contractors.

### MANUFACTURING - NON-DURABLE GOODS

- Food and Kindred Products
- Tobacco Manufactures
- Textile Mill Products
- Apparel and Other Finished Textile Products
- Paper and Allied Products
- Printing and Publishing
- Chemicals and Allied Products
- Petroleum and Coal Products

- Rubber and Miscellaneous Plastic Products
- Leather and Leather Products

### MANUFACTURING - DURABLE GOODS

- Lumber and Wood Products, except Furniture and Fixtures
- Furniture and Fixtures
- Stone, Clay and Glass Products
- Primary Metal Industries
- Fabricated Metal Products
- Machinery, except Electrical
- Electric and Electronic Equipment
- Transportation Equipment, except Motor Vehicles
- Motor Vehicles and Equipment
- Instruments and Related Products
- Miscellaneous Manufacturing

### TRANSPORTATION AND PUBLIC UTILITIES

- Railroad Transportation
- Trucking and Warehousing
- Local, Suburban and Highway Passenger Transportation
- Air Transportation
- Pipeline Transportation
- Water Transportation
- Communication
- Electric, Gas and Sanitary Services

### WHOLESALE TRADE

- Wholesale Trade - Durable Goods
- Wholesale Trade - Non-durable Goods

### RETAIL TRADE

- Building Materials and Garden Supplies
- General Merchandise Stores
- Food Stores
- Automotive Dealers and Service Stations
- Apparel and Accessory Stores
- Furniture and Home Furnishings Stores
- Eating and Drinking Places
- Miscellaneous Retail

### FINANCE, INSURANCE AND REAL ESTATE

- Banking
- Other Credit and Securities Agencies
- Insurance
- Real Estate and Combination Offices

### SERVICES

- Hotels and Other Lodging Places
- Personal, business, and Miscellaneous Repair Services
- Automotive Repair, Services and Garages
- Amusement and Recreation Services
- Motion Picture
- Private Household Services
- Health Services
- Private Educational Services
- Nonprofit Organizations
- Miscellaneous Professional Services

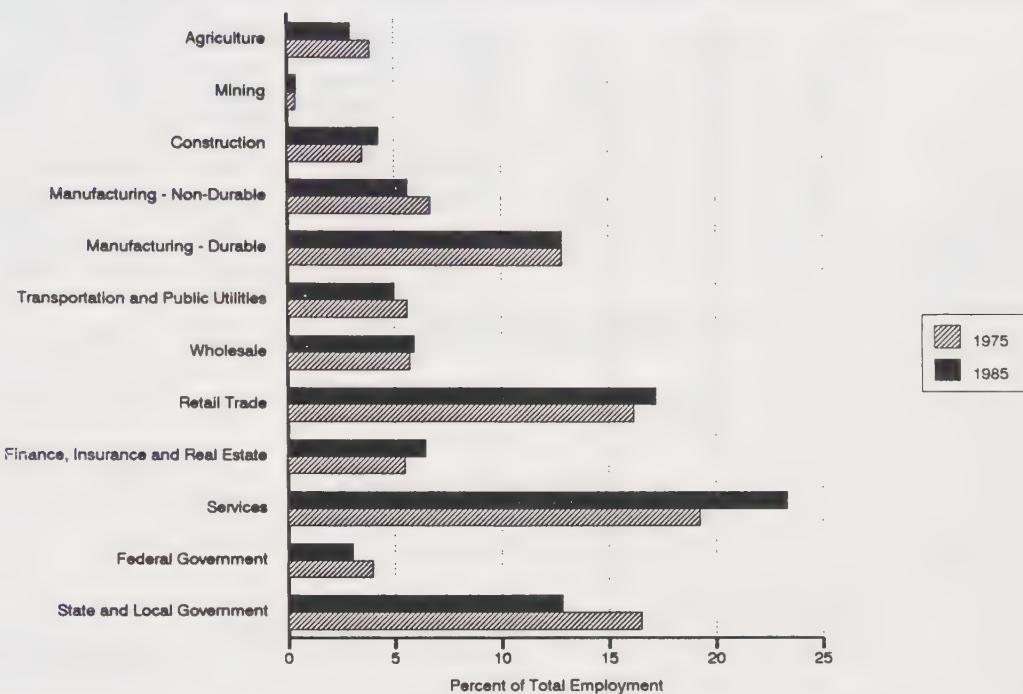
### FEDERAL GOVERNMENT

### MILITARY (active duty)

### STATE AND LOCAL GOVERNMENT

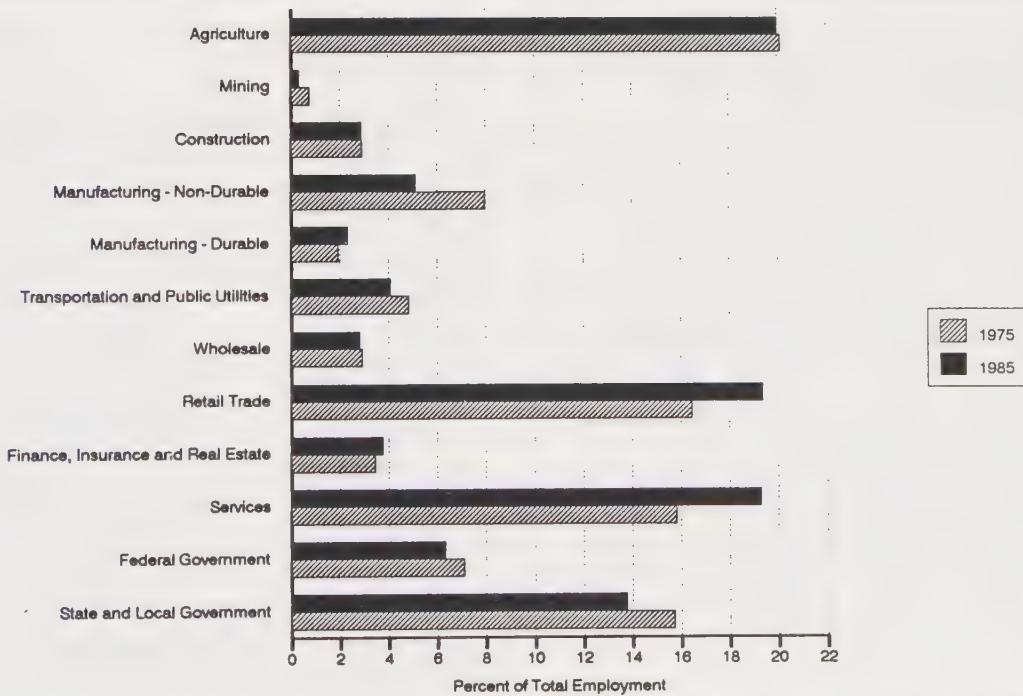
# Chart 1

## California Economy: 1975 vs 1985



# Chart 2

## Monterey County Economy: 1975 vs 1985



**Table 2****Comparison of California and Monterey  
County Employment: 1975 and 1985**

	1975			1985			Relative Change 1975 to 1985	
	Calif- ornia	Mont. County	Diff- erence	Calif- ornia	Mont. County	Diff- erence	Calif- ornia	Mont. County
Agriculture	3.87%	20.12%	-16.25%	2.96%	20.00%	-17.04%	-0.91%	-0.12%
Mining	0.42%	0.75%	-0.33%	0.45%	0.32%	0.13%	0.03%	-0.43%
Construction	3.50%	2.91%	0.59%	4.27%	2.88%	1.39%	0.77%	-0.03%
Manufacturing- Nondurable	6.68%	7.97%	-1.29%	5.64%	5.12%	0.52%	-1.04%	-2.85%
Manufacturing- Durable	12.85%	1.94%	10.91%	12.85%	2.32%	10.53%	0.00%	0.38%
Transportation and Public Utilities	5.61%	4.84%	0.77%	5.00%	4.08%	0.92%	-0.61%	-0.76%
Wholesale Trade	5.71%	2.91%	2.80%	5.93%	2.80%	3.13%	0.22%	-0.11%
Retail Trade	16.18%	16.47%	-0.29%	17.21%	19.36%	-2.15%	1.03%	2.89%
Finance, Insur.	5.47%	3.44%	2.03%	6.46%	3.76%	2.70%	0.99%	0.32%
Real Estate								
Services	19.26%	15.82%	3.44%	23.34%	19.28%	4.06%	4.08%	3.46%
Federal	3.96%	7.10%	-3.14%	3.04%	6.32%	-3.28%	-0.92%	-0.78%
Government								
State and Local Government	16.51%	15.71%	0.80%	12.84%	13.76%	-0.92%	-3.67%	-1.95%

Source: 1. Annual Planning Information, California 1987-88, Employment Development Department 2. Annual Planning Information, Salinas, Seaside, Monterey MSA 1987-88 Employment Development Department

California). During the 10 years from 1975 to 1985 non-durable goods manufacturing declined 2.85% in Monterey County but 1.04% for the state. At the same time durable goods manufacturing state-wide remained the same at 12.85% of total employment while it increased slightly from 1.94% to 2.32% in Monterey County.

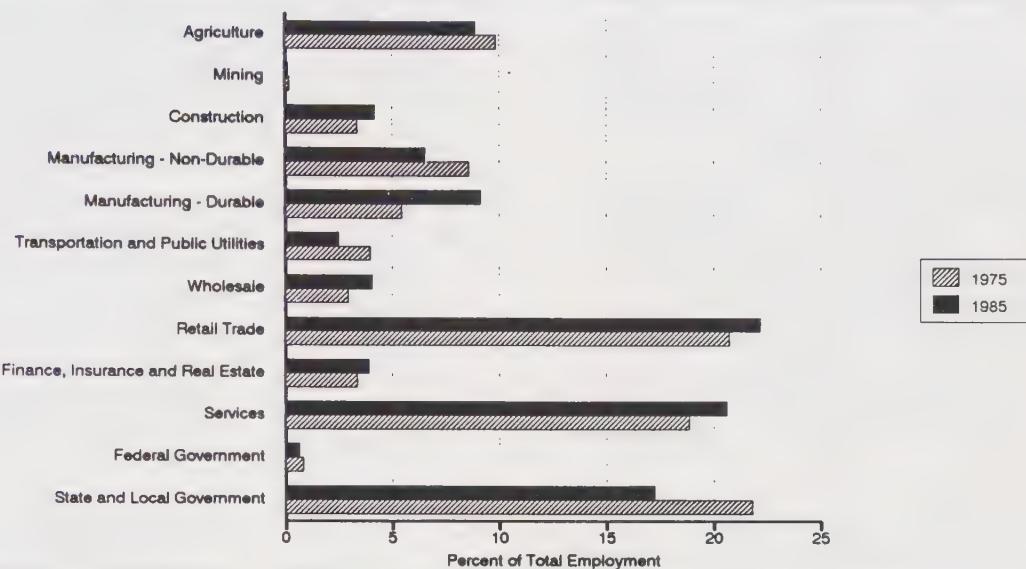
In general, other sectors of the economy such as construction, transportation and public utilities, wholesale trade, and finance, insurance and real estate are relatively stronger at the state level than in Monterey County.

**Santa Cruz County**

Chart 3 and Table 3 on the following page depict California and Santa Cruz County employment in 1975 and 1985. In 1975 the strongest employment sectors of the county economy were government (22.64% of total employment), retail trade (20.75%), and services (18.87%). Although the percent of government employment was similar to the state (20.47% for California, 22.64% for Santa Cruz County) all but a very small amount of Santa Cruz County employment was in state and local government while California had a larger federal government component. Although Santa Cruz County employment in agricul-

## Chart 3

### Santa Cruz County Economy: 1975 vs 1985



**Table 3** Comparison of California and Santa Cruz County Employment: 1975 and 1985

	1975			1985			Relative Change 1975 to 1985	
	Calif- ornia	S Cruz County	Dif- ference	Calif- ornia	S Cruz County	Dif- ference	Calif- ornia	S Cruz County
Agriculture	3.87%	9.85%	-5.98%	2.96%	8.88%	-5.92%	-0.91%	-0.97%
Mining	0.42%	0.21%	0.21%	0.45%	0.13%	0.32%	0.03%	-0.08%
Construction	3.50%	3.35%	0.15%	4.27%	4.18%	0.09%	0.77%	0.82%
Monufacturing- Nondurable	6.68%	8.59%	-1.91%	5.64%	6.53%	-0.89%	-1.04%	-2.06%
Manufacturing- Durable	12.85%	5.45%	7.40%	12.85%	9.14%	3.71%	0.00%	3.69%
Transportation and Public Utilities	5.61%	3.98%	1.63%	5.00%	2.48%	2.52%	-0.61%	-1.50%
Wholesale Trade	5.71%	2.94%	2.77%	5.93%	4.05%	1.88%	0.22%	1.11%
Retail Trade	16.18%	20.75%	-4.75%	17.21%	22.19%	-4.98%	1.03%	1.44%
Finance, Insur. & Real Estate	5.47%	3.35%	2.12%	6.46%	3.92%	2.54%	0.99%	0.56%
Services	19.26%	18.87%	0.39%	23.34%	20.63%	2.71%	4.08%	1.76%
Federal Government	3.96%	0.84%	3.12%	3.04%	0.65%	2.39%	-0.92%	-0.19%
State and Local Government	16.51%	21.80%	-5.29%	12.84%	17.23%	-4.39%	-3.67%	-4.57%

Source: 1. Annual Planning Information, California 1987-88, Employment Development Department 2. Annual Planning Information, Santa Cruz MSA 1987-88 Employment Development Department

ture in 1975 was a smaller percentage of total employment than in Monterey County it was still much larger than the state (Santa Cruz County 9.85%, Monterey County 20.12%, California 3.87%). Also a smaller percentage of total employment was in manufacturing in Santa Cruz in 1975 than in the state (Santa Cruz 14.04% versus California 19.53%). In addition, most county manufacturing employment in 1975 was in non-durable goods manufacturing (8.59% non-durable, 5.45% durable) as opposed to the state where more employment is in durable goods manufacturing (12.85% durable versus 6.68% non-durable).

Substantial change took place in the Santa Cruz County economy between 1975 and 1985. Employment in state and local government (1975 21.80%, 1985 17.23% of total employment), non-durable manufacturing (1975 8.59%, 1984 6.53%) and agriculture (1975 9.85%, 1985 8.88%) all showed large relative decreases. At the same time the county experienced large relative employment gains in durable goods manufacturing (1975 5.45%, 1985 9.14%), retail trade (1975 20.75%, 1985 22.19%) and services (1975 18.87%, 1985 20.63%). Increases in durable goods manufacturing can be attributed to the rapid growth of the electronics industry in the county between 1980 and 1984. Increases in the retail and services sectors mimic similar changes for the state.

## THE REGION'S INDUSTRIES

### Agriculture

Agriculture has traditionally been one of the strongest sectors of the region's economy. This pattern continued to hold true during the 10 years studied in this report. Although agriculture's

relative share of Santa Cruz County employment decreased during the period, both counties experienced steady employment gains throughout the period. Monterey County employment in agriculture grew 33.7% from 18,700 to 25,000 while Santa Cruz County employment grew 44.6% from 4,700 to 6,800. Agricultural employment grew in Monterey County at an annual rate of 2.90% and in Santa Cruz County by 3.76% annually while state agricultural employment grew at an annual rate of 0.57%. During the study period both counties increased their percentage of state-wide employment in agriculture. In 1975 Monterey County employed 5.92% of total agricultural workers state-wide while Santa Cruz County had 1.48% of all agricultural workers. By 1985 these percentages had increased to 7.47% for Monterey County and 2.03% for Santa Cruz County. These two factors taken together indicate that during the study period agriculture in the AMBAG region increased in importance in comparison to the rest of the state while decreasing in importance as an employer within the region.

### Mining

The smallest sector of the regional economy is mining. Both state-wide and locally most mining employment is focused in oil and gas extraction and sand and gravel mining for local construction needs. In 1985, about 200 people were employed in the region in oil and gas extraction and 300 were employed in sand and gravel mining. During the period from 1975 to 1985 mining within the region decreased by 300 employees from 800 to 500 and as a percentage of regional employment from 0.50% to 0.22%. During the same time period mining state-wide grew at an annual rate of 4.08% with total employment rising from 33,900 to

50,600. Mining increased as a percent of state-wide employment from 0.42% to 0.45% during the study period. Regionally, decreases in employment have been shared about equally between oil and gas extraction and sand and gravel mining.

### Construction

State-wide and within the region construction employment has either increased or remained steady as a relative share of total employment during the period from 1975 to 1985. California construction employment increased from 3.50% of total employment to 4.27% between 1975 and 1985. In Monterey County construction employment remained virtually the same at 2.91% of total county employment in 1975 and 2.88% in 1985. In Santa Cruz County construction employment experienced a gain during the period from 3.35% of total employment to 4.18%. During the same time period employment in this sector of the economy grew from 285,900 to 482,300 for the state of California, 2,700 to 3,600 in Monterey County and from 1,600 to 3,200 in Santa Cruz County. This represents an average annual growth rate of 5.37% for the state, 2.92% for Monterey County and 7.18% for Santa Cruz County. According to the Bureau of the Census, County Business Patterns, in 1984, 23.6% of construction workers state-wide worked in general contracting, 17.9% in heavy construction and 57.9% in special trades. Santa Cruz County had similar ratios (27.8% general contracting, 17.8% heavy construction, 54.4% special trades). However, Monterey County had a lower overall percentage of heavy construction employees and a higher percentage of general contracting employees (33.1% general con-

tracting, 10.6% heavy construction, 56.3% special trades).

### Non-Durable Goods Manufacturing

Employment in non-durable goods manufacturing has decreased as a percentage of total employment both in the region and state-wide during the period between 1975 and 1985. Between 1975 and 1985, California employment in non-durable manufacturing decreased from 6.68% to 5.64% of total employment. During the same time period non-durable manufacturing in Monterey County decreased from 7.97% of employment to 5.12%, while in Santa Cruz County it decreased from 8.59% to 6.53%. During the period employment in non-durable manufacturing in Monterey County shrank from 7,400 workers to 6,400 but grew in Santa Cruz County from 4,100 to 5,000 employees. This represents an annual growth rate of -1.44% in Monterey County and 2.00% in Santa Cruz. The California growth rate for the same period was 1.58% annually. The main source of the decrease in Monterey County was a decline during the period of some 400 in food processing employment.

### Durable Goods Manufacturing

During the period from 1975 to 1985 durable goods manufacturing increased slightly as a share of employment in Monterey County but increased substantially in Santa Cruz County. In 1975 1,800 people were employed in Monterey County in durable goods manufacturing and 2,600 in Santa Cruz County. Between 1975 and 1980 Monterey County grew to 2,400 and Santa Cruz grew to 3,800. However, between 1981 and 1985 Santa Cruz County employment in durable goods manufacturing grew to 7,000 while Monterey County increased to 2,900. The reason for this

rapid growth in Santa Cruz County is the rapid development of the electronics industry in the county. Overall, durable goods manufacturing decreased as a share of total employment state-wide from 13.63% to 13.06% but increased from 1.94% to 2.32% in Monterey County and from 5.45% to 9.14% in Santa Cruz County. This represents an annual growth rate of 3.31% for California, 4.88% for Monterey County and 10.41% for Santa Cruz County.

More detailed analysis of the strength of specific industries provides further information on the differences between the state and the two counties of the AMBAG region. In California, the three strongest durable goods industries are electrical and electronic equipment (26.40% of total durable goods manufacturing employment), transportation equipment (20.08% of durable goods manufacturing employment), and machinery - except electrical (18.11% of durable goods manufacturing employment). Employment in Monterey County was similar to the state for electrical and electronic equipment (23.57% of durable goods manufacturing employment), somewhat stronger for machinery - except electrical (25.80% of durable good manufacturing employment), and a great deal stronger in stone, clay and glass products (23.68% of durable goods manufacturing in Monterey County as opposed to 3.73% for the state), and in primary metal industries (Monterey County 12.79% versus 2.80% for the state). Monterey County was a great deal weaker than the state in fabricated metal products and transportation equipment. Santa Cruz County was a great deal stronger than the state in electrical and electronic equipment (38.98% of durable goods manufac-

ting) and machinery - except electrical (34.96% of durable goods manufacturing) and a great deal weaker in fabricated metal products and transportation equipment.

### Transportation and Public Utilities

This sector of the economy grew slowly during the period from 1975 to 1985. In 1975 4,500 people were employed in transportation and public utilities in Monterey County and 1,900 in Santa Cruz County. By 1984 Monterey County had increased to 5,100 employees in this sector while Santa Cruz County remained at 1,900. This represented an annual growth rate of 1.26% for Monterey County and 0.00% for Santa Cruz. During the period this sector decreased from 4.84% of total Monterey County employment to 4.08% and in Santa Cruz County dropped from 3.98% of total county employment in 1975 to 2.48% in 1985. During the same period this sector went from 5.61% of state-wide employment in 1975 to 5.00% in 1985.

### Wholesale Trade

Wholesale trade employment made up 2.94% of Santa Cruz County employment in 1975 and 4.05% in 1985. In Monterey County 2.91% of all workers were employed in wholesale trade in 1975 and 2.80% in 1985. During the study period employment in this sector in Monterey County grew from 2,700 in 1975 to 3,500 in 1985 and from 1,400 in 1975 to 3,100 in 1985 in Santa Cruz County. This represents an annual growth rate of 2.62% in Monterey County and 8.27% in Santa Cruz County. During the same period employment state-wide in this sector grew at an annual rate of 3.70% from 465,900 to 670,300.

## Retail Trade

Retail trade was one of the strongest sectors of both the local and state-wide economies during the period from 1975 to 1985. State-wide, retail trade grew from 16.18% of total employment in 1975 to 17.21% in 1985. An additional 624,700 people were employed. Retail trade as a sector of the economy grew at an annual rate of 3.95% state-wide. In both Monterey and Santa Cruz Counties, growth took place at a faster rate. In Monterey County employment in retail trade grew from 16.47% of all employment in 1975 to 19.46% in 1985. Employment in this sector went from 15,300 to 24,200 at an annual growth rate of 4.69%. During the same time period, employment in retail trade in Santa Cruz County grew from 20.75% of all employment to 22.19%. Employment in this sector grew from 9,100 workers in 1975 to 17,000 in 1985 for an annual growth rate of 6.45%.

Detailed analysis of retail trade employment for the state and the AMBAG region indicates only subtle differences between the two. Both Monterey and Santa Cruz Counties were somewhat higher than the state in employment at eating and drinking places (34.71% of total retail employment in California, 36.89% of retail employment in Monterey County and 39.66% of retail employment in Santa Cruz). In addition, Santa Cruz County was somewhat higher than the state in food store employment (13.73% of total retail employment in California, 16.28% of retail employment in Santa Cruz) and lower in general merchandise employment (10.08% of total retail employment for the state, 7.72% of retail employment for Santa Cruz).

## Finance, Insurance and Real Estate

Finance, insurance and real estate grew quite rapidly both locally and state-wide during the period from 1975 to 1985. In 1975 finance, insurance and real estate made up 5.47% of state-wide employment, 3.44% of Monterey County employment and 3.35% of Santa Cruz County employment. By 1985 it had increased to 6.46% state-wide, 3.76% in Monterey County, and 3.92% in Santa Cruz County. Overall, this sector grew at an annual rate of 5.05% state-wide, 3.92% in Monterey County and 6.49% in Santa Cruz County. Employment increased in this sector by 1,500 in Monterey County and 1,400 in Santa Cruz County.

## Services

The service sector of the economy also increased rapidly between 1975 and 1985. In 1975 1,572,400 people were employed in service occupations state-wide. By 1985 this number had increased to 2,158,800. This represents an annual growth rate of 3.22% and an increase from 19.26% of total employment in 1975 to 23.34% in 1985. During this same time period employment in services in Monterey County grew at an annual rate of 5.07% from 14,700 in 1975 to 24,100 in 1985. This represents an increase from 15.82% of total county-wide employment in 1975 to 19.28% in 1985. In Santa Cruz County employment in services grew at an annual rate of 5.79% from 9,000 in 1975 to 15,800 in 1985. Service employment grew from 18.87% of total employment in Santa Cruz County in 1975 to 20.63% in 1985. A detailed analysis of service employment in the AMBAG region indicates two main differences between service employment in Monterey County and at the state level. Monterey County has a much higher relative share of

employment in the hotel and lodging sector of the service industry. In Monterey County 19.79% of service employment is in the hotel and lodging sector while statewide it is only 5.07%. Monterey County is also somewhat lower than the rest of the state in business service employment. Statewide, 23.65% of all service employment is in business services while in Monterey County the figure is only 15.15%.

Santa Cruz County exhibits several differences from both Monterey County and the rest of the state. Employment in the hotel and lodging sector is similar to the rest of the state, 4.32% of total service employment. However, like Monterey County, Santa Cruz is lower than the rest of the state in business services (16.78% of total service employment versus 23.65% of total service employment statewide). Santa Cruz County is also higher than the rest of the state in amusement and recreation services employment (8.92% of service employment in Santa Cruz County versus 4.49% statewide), health services (31.08% in Santa Cruz versus 25.57% statewide) and social service (8.69% in Santa Cruz versus 5.11% statewide).

#### Federal Government

Federal Government employment is a very important sector of the Monterey County economy but plays only a minor role in the Santa Cruz County economy. This is due to the presence of several large military bases in Monterey County and the absence of any large Federal Government employers in Santa Cruz. In 1975 3.96% of all employment in California was with the Federal Government. By 1985 this figure had shrunk to 3.04%. In 1975 in Monterey County 7.10% of all workers were employed with the Federal Government while by 1985

this figure had shrunk to 6.32%. During the period from 1975 to 1985 employment in this sector grew at an annual rate of .61% state-wide, 1.81% in Monterey County and 2.26% in Santa Cruz. However, this high rate of growth in Santa Cruz County reflects an actual increase in workers from 400 to 500.

#### State and Local Government

This sector of the economy was stronger in Santa Cruz County than in either Monterey County or California because of the presence of the University of California. During the period from 1975 to 1985 employment in this sector of the economy grew by 0.74% annually for California, 1.65% for Monterey County and 2.41% for Santa Cruz County. As a percentage of total employment, this sector decreased both locally and state-wide during the time period under study. In California, employment in state and local government decreased from 16.51% of total employment to 12.94% in 1985. In Monterey County it decreased from 15.71% to 13.76%, while in Santa Cruz County it decreased from 21.80% to 17.23%.

### THE EMPLOYMENT FORECAST PROCESS

In forecasting employment for the counties in the AMBAG region four distinct classes of people are addressed. The largest group is those that both live and work in either Santa Cruz or Monterey County. A second group is those that live in Monterey or Santa Cruz County but commute to work outside the region. Those who live outside the region and commute in to work make up the third group, and those that live within the region and are self employed or employed at home are the fourth group. The ap-

## Table 4

### OBERS Shift Share Model of Regional Employment

$$\log \frac{E_t^{ic}}{E_t^{is}} = a + b^{ic} \log t$$

then

$$E_{t+m}^{is} = [\text{antilog}(\log \frac{E_t^{ic}}{E_t^{is}} + b^{ic} \log m)] E_{t+m}^{is}$$

where

$E$	employment
$i$	industrial sector
$s$	state
$c$	county
$t$	base time period
$m$	number of years in the future
$b$	slope of least squares equation
$a$	y intercept of least squares equation

proach used in the forecast process is to produce separate forecasts for each of these groups and total them to calculate the ultimate product of the process, the forecast of employed county residents.

## FORECAST OF JOBS

### The OBERS Shift-share Model For Employment

Table 4 depicts the OBERS Shift-Share Model of Regional Employment. The purpose of the OBERS model is to project employment activity at the regional level. It is a modified double exponential model whose "competitive" or shift component is implicit. There are two models of employment commonly used for projections. A step down model assumes that the employment in a region can be forecast as some constant share of the states employment for each industry. A trend extrapolation model assumes that future employment can be forecast on the basis of a mathematical extension of trends from the immediate past. The model combines the characteristics of a step down

model and a trend extrapolation model. The OBERS model modifies the assumption of the constant share model via the shift component. This component measures the difference between the proportional growth accounted for by the constant share term and the attained level of economic activity. In other words, an area is assumed to grow faster or slower than the rest of the state with respect to the industry in question because of differences in the area's relative attractiveness to economic activity.

The technique yields a trend extrapolation of an area's historic percentage share of the regional employment total for a given industry. This is accomplished by fitting a least squares regression line to the logarithm of regional percentage shares versus the logarithm of time. The use of the logarithm of percentage shares converts the data to a ratio scale (where the slope of the line expresses the growth rate) so that the projected rate can be compared to the historic rate by observing the comparative slopes. The logarithm of time is used to

## Table 5

### Monterey County Jobs Forecast

	Historical Data			Jobs Forecasts			
	1975	1980	1985	1990	1995	2000	2005
Agriculture	18,700	21,700	25,000	24,800	24,300	23,600	22,900
Mining	700	400	400	400	300	300	300
Construction	2,700	3,300	3,600	4,000	4,500	5,000	5,600
Manufacturing-	7,400	6,500	6,400	6,200	6,200	6,200	6,200
Nondurable							
Manufacturing-	1,800	2,400	2,900	3,800	4,600	5,200	5,800
Durable							
Transportation	4,500	5,200	5,100	4,900	5,000	5,200	5,400
and Public Utilities							
Wholesale Trade	2,700	3,300	3,500	4,000	4,400	4,900	5,400
Retail Trade	15,300	19,400	24,200	28,500	33,200	37,100	41,000
Finance, Insur.	3,200	4,400	4,700	5,900	6,700	7,500	8,200
& Real Estate							
Services	14,700	19,600	24,100	28,300	33,000	36,900	40,800
Federal	6,600	7,300	7,900	9,000	9,700	10,100	10,400
Government							
Military	19,500	20,500	23,100	24,500	24,500	24,500	24,500
(active duty)							
State and Local	14,600	16,600	17,200	19,400	20,800	21,500	22,800
Government							

Source: Historical Data: Annual Planning Information Salinas-Seaside-Monterey MSA 1987-88 Employment Development Department

smooth the slopes of rapidly rising or falling curves.

There are two main advantages to this model in forecasting employment. Comparative studies of the major techniques for forecasting employment at the regional level have found this model to produce the most reasonable results on both a short term and long term basis. In addition, the data inputs required for the model are modest. Only two data sources are needed: historical employment data for both the state and the county being studied, and an employment forecast for the state. Base historical data for this model are from the 1986 Annual Planning Information Report released by

the Employment Development Department for both of the counties in the region and the state. The state level forecast used are the Bureau of Economic Analysis Regional Projections Volume 1 - State Projections to 2035.

Two main sources of data were used to prepare the forecasts of employment. Historical data used are from the Employment Development Departments Annual Planning Information report. These data are collected from yearly employer reports. It reports employment for wage and salary workers only. It does not include self-employed persons, volunteer workers, unpaid family workers, farmers,

## Table 6

### Santa Cruz County Jobs Forecast

	Historical Data			Jobs Forecasts			
	1975	1980	1985	1990	1995	2000	2005
Agriculture	4,700	5,800	6,800	7,000	7,200	7,600	8,000
Mining	100	100	100	100	100	100	100
Construction	1,600	2,600	3,200	3,400	3,600	3,800	3,900
Manufacturing- Nondurable	4,100	6,000	5,000	5,000	4,800	4,600	4,600
Manufacturing- Durable	2,600	3,800	7,000	7,900	8,800	9,800	10,800
Transportation and Public Utilities	1,900	2,100	1,900	1,900	2,000	2,100	2,200
Wholesale Trade	1,400	1,900	3,100	3,500	4,000	4,400	5,000
Retail Trade	9,900	14,000	17,000	19,500	21,900	24,500	26,600
Finance, Insur. & Real Estate	1,600	2,500	3,000	3,400	3,800	4,300	4,800
Services	9,000	12,700	15,800	18,600	20,700	22,300	24,300
Federal Government	400	500	500	500	600	600	700
State and Local Government	10,400	12,400	13,200	14,100	14,800	15,600	16,400

Source: Historical Data: Annual Planning Information Santa Cruz MSA 1987-88 Employment  
Development Department

private household workers or persons involved in labor- management disputes.

The second important piece of data is state-wide employment forecasts. The Bureau of Economic Analysis OBERS Projections is used. These forecasts have been released every 3 years since 1967 and have been shown to be fairly accurate.

The second step in the forecast process was review of the model output by members of the Employment Forecast Technical Advisory Committees. This was done to account for trends in employment which could not be discerned purely on the basis of the historical data. Input from the Technical Advisory Committee Members was

evaluated and incorporated as it was appropriate into the jobs forecast. Table 5 on the previous page and Table 6 above depict the jobs forecasts for Monterey and Santa Cruz Counties.

## FORECAST OF COMMUTING

The forecast of commuting was prepared by AMBAG's transportation planning staff with the assistance of the Monterey County Transportation Commission, Santa Cruz County Transportation Commission, Association of Bay Area Governments, Metropolitan Transportation Commission and San Luis Obispo Council of Governments. The commuting forecast is depicted in Table 7 on the following page. The base data for all

## Table 7

### Forecast of Commuting

#### Monterey County

##### Out Commuting

	1980	1985	1990	1995	2000	2005
Monterey —— Santa Cruz	3,100	3,800	4,500	4,800	5,200	5,500
Monterey —— Other	3,200	4,500	5,200	6,300	7,100	8,100
	6,300	8,300	9,700	11,100	12,300	13,600

##### In Commuting

Santa Cruz —— Monterey	2,300	3,500	3,700	3,900	4,000	4,200
Other —— Monterey	1,500	1,800	2,000	2,100	2,300	2,400
	3,800	5,300	5,700	6,000	6,300	6,600

##### Net Commuting

Net Commuting	2,500	3,000	4,000	5,100	6,000	7,000
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#### Santa Cruz County

##### Out Commuting

	1980	1985	1990	1995	2000	2005
Santa Cruz —— Monterey	2,300	3,500	3,700	3,900	4,000	4,200
Santa Cruz —— Other	15,200	20,000	22,600	24,900	26,600	27,400
	17,500	23,500	26,300	28,800	30,600	31,600

##### In Commuting

Monterey —— Santa Cruz	3,100	3,800	4,500	4,800	5,200	5,500
Other —— Santa Cruz	1,700	2,000	2,200	2,400	2,600	2,700
	4,800	5,800	6,700	7,200	7,800	8,200

##### Net Commuting

Net Commuting	12,700	17,700	19,600	21,600	22,800	23,400
---------------	--------	--------	--------	--------	--------	--------

commute movements are from the 1980 census.

For commute movements within the region (Monterey to Santa Cruz, and Santa Cruz to Monterey) the number of commuters was projected so that the relative percent of total jobs in each county held by in commuters from the other county would remain the same.

Commute movements between Santa Cruz County and other locations are based on commute forecast developed by the Santa Cruz County Transportation Commission for 1985 and 2005.

This primary information was augmented by data from the Metropolitan Transportation Commission.

For the Monterey to other locations commute movement, the projections were derived from year 2000 forecasts developed by the Metropolitan Transportation Commission and the San Luis Obispo Council of Governments.

In-commuting from other locations was calculated by determining the relative percent of that movement in the base year and then applying the same

## Table 8

### Forecast of Self Employed County Residents

#### Monterey County

	1980	1985	1990	1995	2000	2005
Total Jobs in County	130,600	148,100	163,700	177,200	188,000	199,300
Percent Self Employed	5.4%	5.4%	5.4%	5.4%	5.4%	5.4%

#### Santa Cruz County

	1980	1985	1990	1995	2000	2005
Total Jobs in County	64,400	76,600	84,900	92,300	99,700	107,400
Percent Self Employed	12%	12%	12%	12%	12%	12%

relative percent to each of the forecast years.

#### FORECAST OF SELF EMPLOYED COUNTY RESIDENTS

It is anticipated that the percentage of self employed county residents will remain the same through the forecast period. The percentage was determined for the base year by subtracting the number of out commuters from the total number of employed county residents and then subtracting the total number of jobs with licensed businesses, corporations or branches of government. In Monterey County it was found that 5.4% of county residents were self employed while in Santa Cruz the figure was 12%. Monterey County's percentage is skewed downward due to the presence of the large number of Federal Government and military employees. Table 8 depicts the forecast for self employed workers.

#### FORECAST OF EMPLOYED COUNTY RESIDENTS

The forecast of employed county residents is the final product of the employment forecast process. The forecast of employed county residents equals the forecast of jobs within the county minus the forecast of those who commute in from outside the region plus those who commute out of the region for work plus those who live within the region and are self employed. The summary of total employed county residents is depicted in Table 9 on the following page. Chart 4 on page 19 and Table 10 on page 20 depict the forecast of employed county residents for Monterey County. Chart 5 on page 20 and Table 11 on page 21 depict the forecast of employed county residents for Santa Cruz County. The Appendix contains line graphs which depict year-by-year historical and forecast employment data for each industry.

## Table 9 Employment Forecast Summary

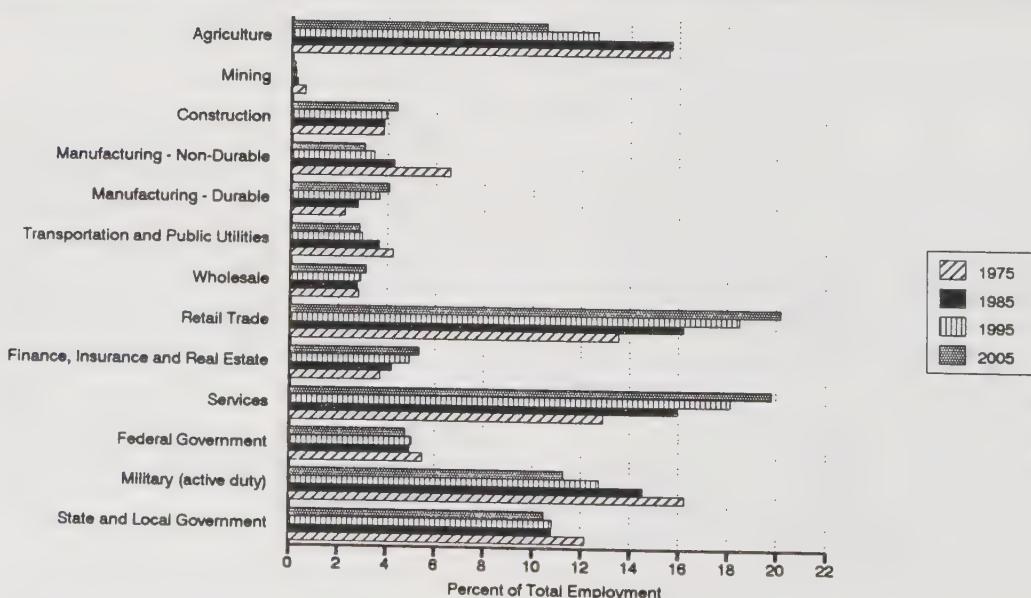
### Monterey County

	1980	1985	1990	1995	2000	2005
Total Jobs in County	130,600	148,100	163,700	177,200	188,000	199,300
+						
Self Employed	7,200	7,900	8,800	9,600	10,200	10,900
+						
Out Commuters	6,300	8,300	9,700	11,100	12,300	13,600
-						
In Commuters	3,800	5,300	5,700	6,000	6,300	6,600
Employed County Residents	140,300	159,000	176,500	191,900	204,200	217,200

### Santa Cruz County

	1980	1985	1990	1995	2000	2005
Total Jobs in County	64,400	76,600	84,900	92,300	99,700	107,400
+						
Self Employed	7,600	9,300	10,300	11,300	12,100	12,900
+						
Out Commuters	17,500	23,400	26,300	28,800	30,600	31,600
-						
In Commuters	4,800	5,800	6,700	7,200	7,800	8,200
Employed County Residents	84,700	103,500	114,800	125,200	134,600	143,700

## Chart 4 Monterey County Employment: 1975-2005

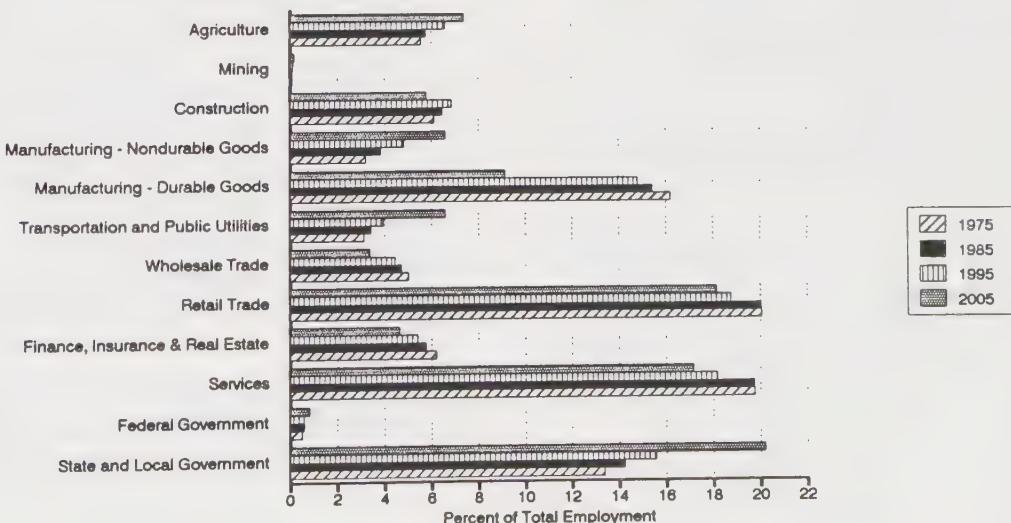


## Table 10 Forecast of Employed Monterey County Residents

	Historical Data				Employment Forecasts		
	1975	1980	1985	1990	1995	2000	2005
Agriculture	18,700	21,700	25,000	24,800	24,300	23,600	22,900
Mining	700	400	400	400	300	300	300
Construction	4,600	5,600	6,100	6,800	7,600	8,500	9,500
Manufacturing- Nondurable	7,900	6,900	6,800	6,600	6,600	6,600	6,600
Manufacturing- Durable	2,700	3,600	4,400	5,700	7,000	7,900	8,800
Transportation and Public Utilities	5,100	5,900	5,800	5,600	5,700	5,900	6,200
Wholesale Trade	3,400	4,200	4,400	5,000	5,600	6,200	6,800
Retail Trade	16,300	20,700	25,800	30,400	35,500	39,600	43,800
Finance, Insur. & Real Estate	4,500	6,200	6,700	8,400	9,500	10,600	11,600
Services	15,500	20,700	25,400	29,900	34,800	38,900	43,000
Federal Government	6,600	7,300	7,900	9,000	9,700	10,100	10,400
Military (active duty)	19,500	20,500	23,100	24,500	24,500	24,500	24,500
State and Local Government	14,600	16,600	17,200	19,400	20,800	21,500	22,800
Total	120,100	140,300	159,000	176,500	191,900	204,200	217,200

Source: Historical Data: Annual Planning Information Salinas-Seaside-Monterey MSA 1987-88 Employment Development Department

## Chart 5 Santa Cruz County Employment: 1975-2005



**Table 11 Forecast of Employed Santa Cruz County Residents**

	Historical Data			Employment Forecasts			
	1975	1980	1985	1990	1995	2000	2005
Agriculture	4,600	5,800	6,800	7,000	7,200	7,400	8,000
Mining	100	100	100	100	100	100	100
Construction	3,600	5,700	7,100	7,500	8,100	8,500	8,800
Manufacturing- Nondurable	4,100	5,900	5,000	5,000	4,800	4,600	4,600
Manufacturing- Durable	5,700	8,300	15,300	17,300	19,300	21,000	23,300
Transportation and Public Utilities	4,100	4,400	4,100	4,100	4,300	4,500	4,500
Wholesale Trade	2,100	2,900	4,600	5,300	5,900	6,500	7,200
Retail Trade	11,300	16,100	19,400	22,300	25,100	27,700	30,000
Finance, Insurance & Real Estate	2,900	4,700	5,600	6,500	7,200	8,200	8,900
Services	10,700	15,200	18,800	22,100	24,700	26,800	28,400
Federal Government	500	600	600	600	700	700	700
State and Local Government	12,600	15,000	16,100	17,000	17,800	18,600	19,200
Total	62,300	84,700	103,500	114,800	125,200	134,600	143,700

Source: Historical Data: Annual Planning Information Santa Cruz MSA 1987-88 Employment Development Department

### SPECIAL CASES: MILITARY IN- STALLATIONS AND THE UNIVER- SITY OF CALIFORNIA

The methodology used for the forecast assumes that changes in employment in the AMBAG Region are the result of economic forces at work at the state level. For certain large employers in the region (military bases and the University of California) this is not the case. These provide service on a state or national level and respond to public decision makers at that level. As a result, employment by these employers cannot be forecast on the basis of historical state/county employment trends. The forecasts for these employers were carried out by interviewing planning staff and requesting

information on the future plans of these organizations.

It was reported that as of 1986 total active duty military personnel numbered 17,113 at Ft. Ord. In addition, 4,926 civilian persons were employed at the base. By 1992-93 active duty personnel should decrease at Ft. Ord to 16,300 while civilian employment will decrease to around 3,071. These figures should remain steady throughout the remainder of the forecast period.

In 1986, 576 active duty personnel and 128 civilian employees were found at Ft. Hunter Liggett. It is expected that

there will be no change in these figures through the forecast period.

In 1980, 3,080 active duty personnel were stationed at the Presidio of Monterey and 1,136 civilians were employed there. It is anticipated that by 1992 there would be 4,633 military and 1,700 civilians employed at the Presidio. These numbers should remain steady throughout the forecast period.

Currently there are 884 civilian employees, 1,775 enrolled students and 187 activity duty staff members for the Naval Postgraduate School. It is anticipated that the school will reach its maximum in 1990 when there will be about 1,800 enrolled students, 900 civilian employees and 180 - 190 active duty staff members. These employment levels will then remain steady throughout the forecast period.

Determining how to forecast for the University of California was difficult since they are in the middle of their Long Range Development Plan program and do not expect final approval of the plan by the Regents until next spring. However, several facts do appear clear.

- a. The University has an adopted Twenty Year Academic Plan which calls for an enrollment of 12,000 to 15,000 in 2005.
- b. State-wide trends indicate a boom in University of California system enrollments in the near term.

c. Enrollments at UC Santa Cruz have increased strongly in the past several years, and preliminary data for Fall 1987 show no change in this trend.

Given these facts it is clear that a substantial increase in the UC Santa Cruz population can be expected in the next 20 years. However, factors exist which could limit the ability of the University to grow to its full expected size of 15,000 students. At this point, the environmental impact of this level of growth is not clear. In addition, opposition within the community could affect growth of the University. Although University officials are optimistic about mitigating the impact of University growth on the community, at this time the data do not clearly indicate that the university will grow to 15,000. However, it does appear clear that it will grow to at least 12,000. As a result, the employment forecast for the University has been based on a 2005 enrollment of 12,200. University employment in 1985 was 2,230. The employment forecast is based on 1993 University employment of 3,060 and 2005 University employment of 3,630.

In the forecast, employment of civilians at military bases is totaled as part of the category "Federal Government". Active duty personnel only are included in the category "Military". Employees of all types at the University of California are included in the "State and Local Government" category.







# County-wide Population Forecast

## THE COUNTY-WIDE POPULATION FORECAST PROCESS

The second step in the socio-economic forecast process was the preparation of the county-wide population forecasts for both Monterey and Santa Cruz Counties. As mentioned above, the population forecast must take into consideration three groups of people: those who move to the AMBAG region for employment (adults age 18 - 64 years), those who move here because they are a dependent of an employed person (children 0 - 17 years), and retired adults (age 65 and over). A different method has been used to forecast population for each of these groups. The following section describes the forecast methodology used for each of these groups and the

results of the county-wide population forecasts.

### ADULTS AGE 18 - 64

The forecast of population for adults age 18 - 64 has been produced on the basis of the county-wide forecast of employed county residents and a forecast of labor force participation rate. Table 12 summarizes the results of the forecast of labor force participation and adults age 18 - 64 for both Monterey and Santa Cruz Counties. The labor force participation rate is a ratio which expresses the relationship between the number of those who are active in the labor force (employed) and the total population of adults. It is determined by dividing the number of employed persons by the total number

**Table 12** Labor Force Participation Forecast

	1980	1990	1995	2000	2005
California	0.72	0.75	0.74	0.74	0.74
Monterey County	0.74	0.77	0.76	0.76	0.75
Santa Cruz County	0.72	0.75	0.74	0.74	0.74
<b>Monterey County</b>					
Employed County Residents	133,873	176,500	191,900	204,200	217,200
Divided by					
Labor Force Participation	0.74	0.77	0.76	0.76	0.75
Population 18 - 64 years old	181,375	229,200	252,500	268,700	290,800
<b>Santa Cruz County</b>					
Employed County Residents	84,700	114,800	125,200	134,600	143,700
Divided by					
Labor Force Participation	0.72	0.75	0.74	0.74	0.74
Population 18 - 64 years old	118,060	153,100	169,200	181,900	194,200

of persons. In 1980, the labor force participation rate for the state of California was 0.72, for Monterey County it was 0.74 and for Santa Cruz County it was 0.72. Monterey County's rate is somewhat higher than either the state or Santa Cruz County because of the presence of the military installations in the county. The forecast of labor force participation rate used in this report is drawn from the Bureau of Economic Analysis' forecast for the state. First, the rate of change in the state forecast was calculated for each five year period. Then that same rate of change was applied to the base year 1980 Census data for Monterey and Santa Cruz Counties. Then a forecast of adults age 18 - 64 was produced by dividing the forecast of employed county residents by the forecast labor force participation rate.

## DEPENDENT CHILDREN AGE 0 - 17 YEARS

The second group for which a population forecast was produced is dependent children age 0 - 17. Population change within this group is the result of birth, death and net in or out migration. These two factors were modeled using a cohort survival model. The cohort survival model is a demographic model of population change. The base data for the model are age and race specific population data; in this case, 1980 Census data were used. Also needed are age and race specific birth and survival rates and net migration rates. Age and race specific birth and survival rates were calculated using data from the state Department of Health. Since this group is dependent on adults, the net migration rate is assumed to be the same as that calculated for working age adults. Beginning with the base year data, the death and net migration rates

are applied to each age cohort of the population. In this manner the changes in population that would be expected to occur because of death and movement into or out of the area can be estimated. In addition, the number of children in the less than one year old age cohort is calculated for each model year on the basis of the projected population of women in their child bearing years and race and age specific birth rates. Table 13 on the following page depicts the age and race specific birth rates calculated for the purpose of this forecast and the forecast of children age 0 - 17 for both Monterey and Santa Cruz Counties.

## SENIOR ADULTS AGE 65 + YEARS

The third group for whom population was projected is senior adults age 65 +. Death and net in and out migration are the causes of population change for this group. The population projection for senior adults was produced using the cohort survival model. As was true for children age 0 - 17 the age and race specific survival rate was calculated from state Department of Health data. The net in and out migration rate was based on data on Medicare claims from the state Department of Finance. Table 14 on page 26 depicts the forecast of adults 65 and over for both counties. Table 15 on page 26 summarizes the population forecast for all three groups of the population in each county.

## UNDOCUMENTED ALIENS

Undocumented aliens pose a particular problem in population forecasting. By their very nature they are people for whom data do not exist. Currently, there is no estimate of the number of undocumented aliens living in either Monterey or Santa Cruz

## Table 13 Population Forecast for Children Age 0 - 17

### Age and Race Specific Birth Rates

#### Monterey County

Age of Mother	Composite	Hispanic	All Others
15 - 19 years	0.07558	0.11128	0.03827
20 - 24 years	0.15323	0.19309	0.09685
25 - 29 years	0.13920	0.16433	0.09835
30 - 34 years	0.07792	0.10524	0.05383
35 - 39 years	0.02830	0.04785	0.01629
40 - 44 years	0.00691	0.01877	0.00254

#### Santa Cruz County

Age of Mother	Composite	Hispanic	All Others
15 - 19 years	0.04334	0.02861	0.04660
20 - 24 years	0.08899	0.05292	0.09623
25 - 29 years	0.09779	0.05427	0.10531
30 - 34 years	0.06667	0.03407	0.07118
35 - 39 years	0.02241	0.01567	0.02369
40 - 44 years	0.00932	0.00716	0.00965

#### Forecast of Dependant Children Age 0 - 17

	1980	1990	1995	2000	2005
Monterey County	82,319	103,200	108,100	114,300	117,800
Santa Cruz County	45,183	55,100	62,200	66,600	70,400

Counties. In addition, no estimate exists of the rate at which undocumented aliens have been entering either county. Further difficulties have been introduced by the recent change in the laws governing immigration and employment of aliens. The Bureau of the Census has prepared estimates of the number of undocumented aliens who migrated into the state between 1981 and 1986. The state Department of Finance has disaggregated this forecast to each of the counties in the state. These estimates indicate that between 1981 and 1986 20,932 undocumented aliens migrated into Monterey County and 7,586 into Santa Cruz County. However, Department of Finance has no data to offer and no suggested method for forecasting the number of undocumented aliens in the future. In addition, these estimates do not ac-

count for undocumented workers living in Monterey or Santa Cruz County prior to 1980.

A further problem with producing forecasts of undocumented workers is the differences between the lifestyles and demographics of undocumented workers and those of the rest of the population. Undocumented workers tend to live very transient lifestyles. In addition, the undocumented worker and illegal alien populations have a higher percentage of young adults age 20 to 35 than the rest of the population.

These problems however do not mean that undocumented workers are unaccounted for in the forecast. The Employment Development Department believes that most undocumented workers are represented in the

**Table 14** Population Forecast for Adults Age 65+

	1980	1990	1995	2000	2005
Monterey County	26,750	35,190	39,900	45,100	49,100
Santa Cruz County	24,898	27,900	29,500	31,400	33,000

**Table 15** Countywide Population Forecast Summary**Monterey County**

	1980	1990	1995	2000	2005
0 - 17 years	82,319	103,200	108,100	114,300	117,800
18 - 64 years	181,375	229,200	252,500	268,700	290,800
65 + years	26,750	35,190	39,900	45,100	49,100
Total	290,444	367,590	400,500	428,100	457,700

**Santa Cruz County**

	1980	1990	1995	2000	2005
0 - 17 years	45,183	55,100	62,200	66,600	70,400
18 - 64 years	118,060	153,100	169,200	181,900	194,200
65 + years	24,898	27,900	29,500	31,400	33,000
Total	188,141	236,100	260,900	279,900	297,600

historical employment data used as a base for the forecast. In addition, the Bureau of the Census believes that most undocumented workers and illegal aliens who were present in the region at the time of the last census were accounted for. Since it is not known exactly how many undocumented workers are accounted for in the base data, producing forecasts or estimates for this group risks double counting and producing an unrealistically high forecast.

Given the lack of specific data it is not possible at this time to produce a forecast for the undocumented worker or illegal alien population. Therefore the approach taken in this report assumes that most if not all undocumented workers and illegal aliens have been accounted for in the base data, and no special forecast for this group has been produced. Hopefully, with data from the 1990 Census and information on the impact of the new immigration laws a forecast which explicitly accounts for undocumented workers and illegal aliens will be produced.





# Small Area Population Forecasts

## The Small Area Population Forecast Process

The third step in the AMBAG Employment and Population Forecast process is the preparation of small area forecasts. This chapter describes the method used to prepare the small area forecasts, the actual results for each of the jurisdictions and census tracts in the AMBAG region, and the approach used for other areas such as the University of California, military bases and Soledad prison facility.

The previous chapters explained the methods used to produce the county-wide employment and population forecasts. These methods mimic the impact of two forces beyond the control of individual jurisdictions. These are changing levels of employment and changes in the demographic makeup of the population. Changes in employment take place because of state, national and international economic trends. So, the AMBAG employment model depends on state level forecasts which take into account national and international trends. Data from the local level are then used to determine how employment in the region will respond to these external trends. Changes in the demographics of the population are also the result social and cultural changes on the national level. These state and national level trends in economics and demographics establish the maximum number of people who can be expected to live in the region because of employment, to be dependant on employed persons

living in the region, or to live here in their retirement years. Since the county-wide employment and population forecasts establish the maximum number of people who will desire to live in the region they can be considered a measure of demand to live in the AMBAG region. If there were no constraints on their ability to live in the AMBAG region this would be the stopping place for the forecasts. Unfortunately, there are constraints which would limit the utility of forecasts which accounted only for demand. The most important of these is the ability of the jurisdictions in the region to allow housing to be built for anticipated population growth. So, the third step of the employment and population forecast process involves an evaluation of the ability of each jurisdiction and census tract in the region to support population growth demand as forecast in the first two steps.

Two possibilities exist when the demand for population growth is compared with the ability to serve population growth. The first is that demand for population growth will turn out higher than the ability to serve new population. If this were the case then the ability to serve new population would be considered a limiting factor and the county-wide employment and population forecasts would be decreased to the total ability to serve new population of all the jurisdictions in the region. As a practical matter there are several potential results from this situation. More people would desire to live in the region than could.

As a result, there might be higher levels of commuting to the region from other areas. In addition, areas within the region might experience increases in housing costs due to increased demand.

On the other hand, it is also possible that the ability to serve new population could be higher than the demand for additional population. In this case the demand for additional population as determined in the county-wide employment and population forecasts would be considered the limiting factor. Development of housing to serve populations above those demanded could result in an over abundance of housing and lead to decreases in housing prices and rents.

Producing a small area population forecast for the jurisdictions of the AMBAG region involves balancing the demand for employment, population and housing as indicated by the county-wide employment and population forecasts, and the number of people who can be supplied with housing by the jurisdictions. The following describes the methodology used by AMBAG in preparing the small area forecasts.

First, the actual rate of increase in housing units was calculated for each jurisdiction for the period from 1980 to 1987. These data were derived on the basis of the 1980 census and 1987 data from the California Department of Finance on the number of dwelling units in each jurisdiction.

Second, estimates of household size were obtained from the California Department of Finance for 1987. The forecasts assume that household size will return to and in some cases exceed

those experienced historically throughout the region.

Third, estimates of the number of dwelling units in each jurisdiction at build-out were obtained from the local planning departments.

Fourth, local planning officials were interviewed to identify land use, economic or social trends or events which they expected to have significant impact on population change. Examples include changes in household size, land use patterns, the development of major residential projects, or anticipated shortages of infrastructure. Both this step and previous ones were hampered by the fact that several jurisdictions in the region are in the middle of general plan updates. These include the cities of Salinas, Watsonville, Santa Cruz and Carmel. The following describes significant factors for each jurisdiction and the approach taken in forecast preparation to account for those factors. The population forecasts for cities, city spheres of influence, unincorporated areas and census tracts are depicted in Table 16 and 17 on pages 29 and 33 with census tract maps of each county immediately following.

## SANTA CRUZ COUNTY

### City of Capitola

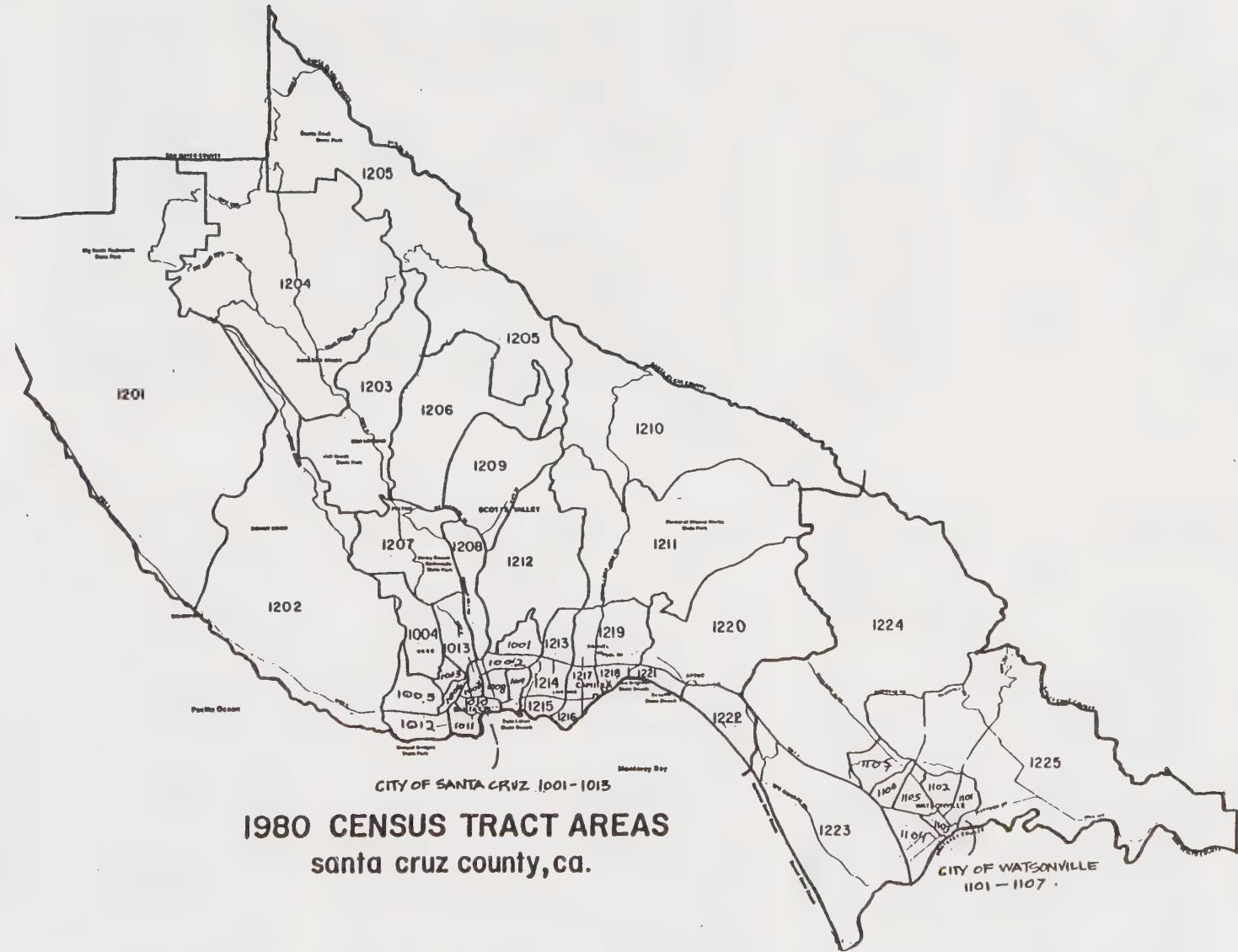
Capitola is close to total buildout of the available vacant residential land in the city. City planning staff estimate that 76 units could be constructed on the remaining four residential sites in the city. At the same time trends towards increased household size and use of second units for year round occupancy will cause increases in the total household population. Forecasts for the city's sphere of influence were not included for Capitola. This was

**Table 16** Small Area Population Forecast for Santa Cruz County

CITY	CENSUS TRACT	1980	1990	1995	2000	2005
CAPITOLA	1216	290	326	339	350	361
	1217	3,710	4,168	4,334	4,472	4,612
	1218	5,072	5,698	5,925	6,114	6,304
	1219	6	7	7	8	8
	1221	17	19	20	20	21
		9,095	10,218	10,625	10,964	11,307
SANTA CRUZ	1001	1,942	2,177	2,369	2,558	2,717
	1002	4,887	5,338	5,514	5,833	6,144
	1003	1,995	2,233	2,464	2,683	2,858
	1005	3,555	4,351	4,595	4,944	5,330
	1006	2,782	2,953	3,083	3,255	3,424
	1007	1,352	1,505	1,620	1,740	1,842
	1008	4,988	5,799	5,907	6,333	6,657
	1009	3,496	4,307	4,481	4,836	5,298
	1010	5,075	5,992	6,289	6,614	7,018
	1011	4,794	5,472	5,700	5,972	6,112
	1012	2,721	3,992	4,335	4,864	5,536
	1013	160	169	179	193	214
	1208	92	151	154	160	167
	1212	600	637	732	800	854
	1213	3	3	3	3	3
	1215	46	46	46	46	46
		38,488	45,125	47,471	50,834	54,220
UC Santa Cruz	1004	2,995	4,400	6,250	7,160	7,720
Total including UC		41,483	49,525	53,721	57,994	61,940
SCOTTS VALLEY	1207	0	16	24	32	40
	1208	1,709	2,182	2,490	2,763	2,823
	1209	3,520	5,222	6,584	7,684	7,804
	1212	1,662	2,142	2,462	2,587	2,712
		6,891	9,562	11,560	13,066	13,379
WATSONVILLE (present city limits)	1101	3,682	4,567	4,900	4,900	4,900
	1102	4,285	5,020	5,300	5,300	5,300
	1103	4,431	5,000	5,400	5,400	5,400
	1104	2,735	4,321	4,500	4,500	4,500
	1105	5,320	8,656	9,500	9,500	9,500
	1106	3,027	3,864	3,900	3,900	3,900
	1107	57	70	70	70	70
	1223	6	39	60	60	60
		23,543	31,537	33,630	33,630	33,630

CITY	CENSUS TRACT	1980 <sup>1</sup>	1990	1995	2000	2005
WATSONVILLE	1101	124	1,393	1,520	1,520	1,520
(current sphere of influence)	1102	163	201	430	430	430
	1104	23	23	23	23	23
	1105	1,725	1,827	1,977	1,977	1,977
	1106	2,167	2,401	2,600	2,600	2,600
	1107	2,524	2,889	3,200	3,200	3,200
	1223	0	0	0	0	0
	1225	1,234	2,271	3,100	3,100	3,100
		7,960	11,005	12,850	12,850	12,850
WATSONVILLE	1101	0	0	542	1,142	1,514
(remainder of planning area outside current sphere)	1102	0	0	590	1,229	1,688
	1225	2,031	2,031	4,805	7,381	8,967
		2,031	2,031	5,937	9,752	12,169
WATSONVILLE CITY PLANNING AREA TOTAL		33,534	44,573	52,417	56,232	58,649
UNINCORPORATED	1001	78	79	80	81	81
	1004	68	72	74	78	78
	1005	69	70	72	77	79
	1012	151	152	163	172	182
	1013	543	616	662	703	741
	1201	650	718	762	798	830
	1202	2,296	2,845	3,138	3,413	3,674
	1203	4,825	5,485	5,883	6,049	6,070
	1204	7,696	8,862	9,388	9,825	10,718
	1205	2,162	2,820	3,173	3,514	3,844
	1206	4,357	5,331	5,654	5,920	6,246
	1207	4,595	5,105	5,225	5,347	5,573
	1208	2,961	3,374	3,662	3,663	3,663
	1209	1,333	1,566	1,673	1,771	1,866
	1210	3,135	3,807	4,148	4,476	4,791
	1211	1,680	2,076	2,257	2,377	2,487
	1212	2,467	2,870	3,077	3,373	3,728
	1213	2,889	3,928	4,447	4,870	5,303
	1214	6,630	9,459	10,383	11,154	12,231
	1215	4,502	5,519	6,110	7,587	8,550
	1216	4,947	6,662	7,030	7,202	7,579
	1217	2,057	3,218	3,895	3,895	3,896
	1218	6,212	9,167	10,037	10,989	12,289
	1220	6,707	8,696	9,461	10,109	10,768
	1221	2,498	3,285	3,685	4,068	4,445
	1222	7,067	9,396	10,346	11,018	12,160
	1223	3,606	4,403	4,552	4,663	4,778
	1224	6,149	7,667	8,458	9,254	10,376
	1225	4,808	4,974	5,084	5,199	5,300
		97,138	122,222	132,578	141,644	152,325
COUNTY WIDE TOTAL		188,141	236,100	260,900	279,900	297,600

<sup>1</sup>1980 Census



done because the city's sphere of influence has been put into a redevelopment district by the county and the city has stated that they will not annex.

### **City of Santa Cruz**

Santa Cruz is estimated by city planning staff to be approaching buildout of all available residential land. Information compiled for the city's upcoming General Plan Update shows that about 170 acres of land zoned for single family units and 106 acres for multi-family units remain. It could accommodate 817 new single family units and 1251 new multi-family units. At buildout the city would have a total of 21,191 housing units. The city is currently about 90% percent builtout.

Between 1960 and 1986 an average of 313 new units were constructed per year in Santa Cruz. However, between 1980 and 1986 the average was 172. AMBAG staff estimates that between 1987 and 1995 units will continue to be constructed at about the same rate as between 1980 and 1986. From 1995 - 2000 and 2000 - 2005 the rate will drop due to lack of available land for new construction.

In addition, AMBAG and city staff concur that population per household will rise past the historical level of about 2.5 to around 2.6 by 2005.

The city does not have a sphere of influence, so no sphere of influence population forecast was calculated.

### **City of Scotts Valley**

No additional assumptions beside those described in the general methodology were applied to Scotts Valley. Land currently within city limits was found to be sufficient to accommodate all projected population

growth. As a result, it is not anticipated that the city will annex its sphere of influence within the forecast period. Therefore a population forecast for the city's sphere of influence was not included.

### **City of Watsonville**

There is some difficulty involved in preparation of population forecasts for the City of Watsonville due to the fact that it is updating its General Plan and is also rapidly approaching buildout of the lands within its city limits. City staff estimates that buildout of all residentially zoned land in the city limits will occur within 7 years. In addition, the city is 95% surrounded by land in agricultural uses, with significant portions in agricultural preservation. The breakdown of the population forecast for the city has been estimated by AMBAG and city staff working together. It is based on a population per household for the city of about 2.93, the 1987 Department of Finance estimate. In addition, it was assumed that population growth would continue at about the same rate as the 1980 to 1987 period.

The disaggregation for Watsonville City, sphere of influence and planning area has been based on efforts by AMBAG and city staff to anticipate the outcome of the city's general plan update process. It appears clear to all parties involved that the city will continue to grow to levels anticipated by the forecast. However, disagreement still exists as to the geographical distribution of the forecast population. The LAFCo executive officer has stated that LAFCo will not be bound by the geographical distribution of the current forecast.

## Unincorporated Areas

The unincorporated areas of Santa Cruz County are very diverse, varying from farms, range land and timber to residential areas at urban densities. In light of this, the population forecasts for the unincorporated area of Santa Cruz County were prepared on a census tract by census tract basis. In general, AMBAG staff anticipates that population per household in the unincorporated area will return to the historical level of 1950 to 1975 from the low level reported in the 1980 census.

The county unincorporated areas experienced a high vacancy rate in 1980. This is believed to be due to second ownership homes. It has been assumed that vacancy rates for existing units will remain high while the rate for new units will be around 5 percent.

In addition, some unincorporated areas will approach buildout by 2005. Additional population which could not be accommodated in builtout areas has been shifted to the nearest unincorporated area with vacant residential land.

## MONTEREY COUNTY

### City of Carmel-by-the-Sea

The city of Carmel-by-the-Sea is close to the buildout of its current city limits. According to city staff 79 sites for single family units remain vacant. An additional 553 units could be created on combined lots with only one unit presently existing. Also, between 70 and 120 multi-family units could be created on the single remaining high density residential site.

The city's housing stock can also expand due to additions to existing units. Over the past four years additions to

existing single family units have been requested at a rate of 165 per year with an average value of \$60,000 dollars.

According to the 1980 census, the town experienced a vacancy rate of almost 20 percent. This appears to be due to large numbers of second ownership units. In the forecast, the vacancy rate of existing units was assumed to stay at 1980 levels, but vacancy for new units was assumed to be 5 percent.

### City of Del Rey Oaks

In the city of Del Rey Oaks only two vacant sites remain which could be developed for residential uses. One of these is currently under construction as a 150 unit condominium development. The other is under review for potential development as a hotel. As a result, the population forecasts anticipate that population in the city will be stable from 1990 to 2005. This figure could increase significantly without the construction of additional units were population per household to return to the higher levels experienced between 1960 and 1970.

### Ft. Ord

Separate forecasts were prepared for Ft. Ord and the Marina and Seaside sections of the on-base housing. This was done using data from the Department of Defense's five year facility plan for the base.

### City of Gonzales

The population forecast for the City of Gonzales was prepared using the general methodology described above. However, the city's rate of growth suggests that the current city limits will be built out by 1995 and the existing sphere of influence before the year 2000. Both AMBAG and city staff believe that the city will continue to

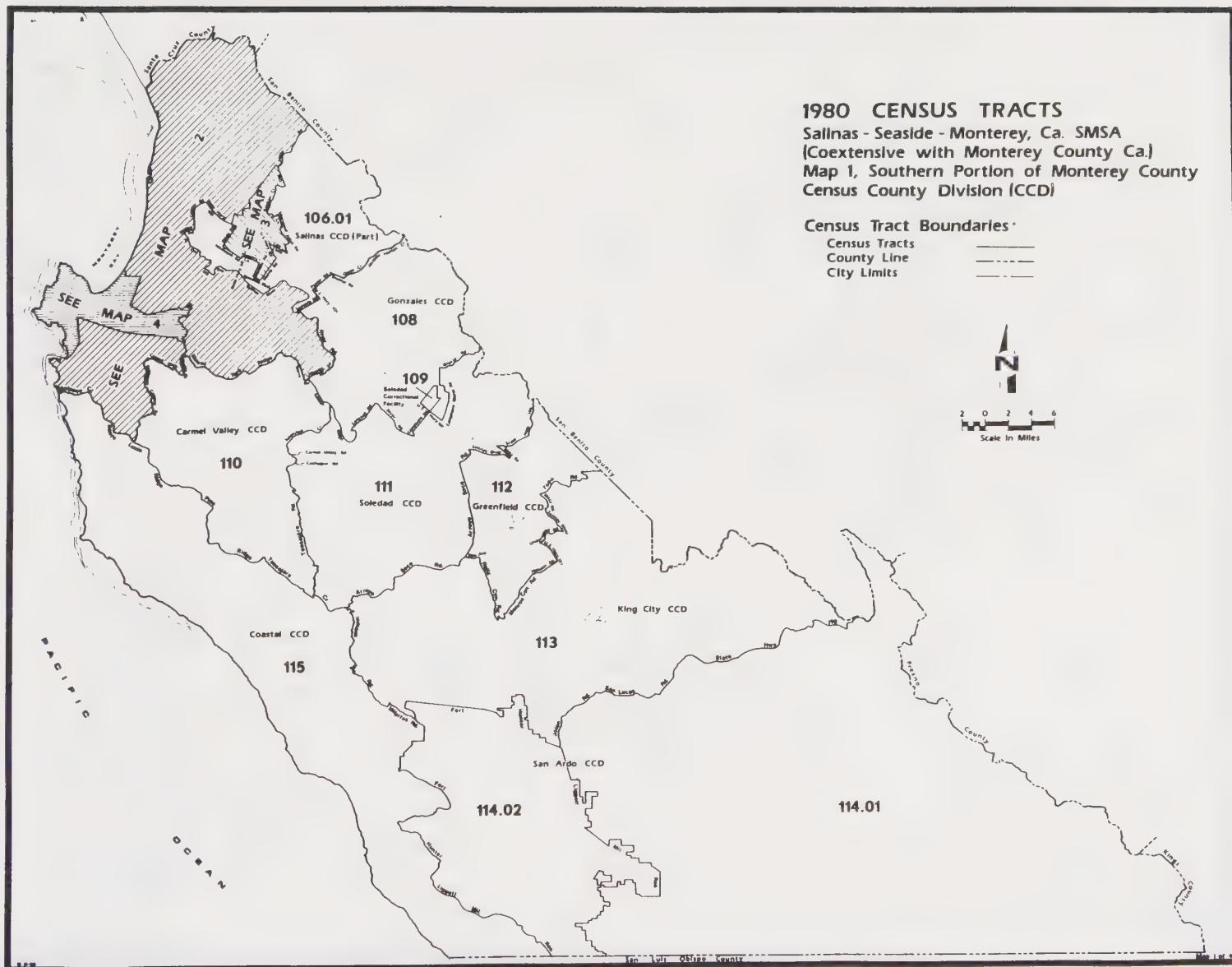
**Table 17** Small Area Population Forecast for Monterey County

CITY	CENSUS TRACT	1980 <sup>1</sup>	1990	1995	2000	2005
CARMEL	117	267	292	310	325	345
	118	4,440	4,868	5,160	5,415	5,725
		4,707	5,160	5,470	5,740	6,070
DEL REY OAKS	134	1,557	1,840	1,840	1,840	1,840
FT. ORD - MARINA	141	6,760	13,321	14,014	14,014	14,014
SEASIDE	141	15,660	17,139	18,110	18,110	18,110
REMAINDER	141	0	0	0	0	0
		22,420	30,460	32,124	32,124	32,124
GONZALES	108	2,891	5,180	5,180	5,180	5,180
Sphere of Influence	108	NA	0	420	840	840
		2,891	5,180	5,600	6,020	6,020
GREENFIELD	112	4,181	7,290	7,540	7,688	7,710
Sphere of Influence	112	NA	0	610	778	778
		4,181	7,290	8,150	8,466	8,488
KING CITY	113	5,495	7,660	9,635	10,464	11,684
Sphere of Influence	113	NA	921	1,901	2,712	2,759
		5,495	8,581	11,536	13,176	14,443
MARINA	103	0	0	0	0	0
	106	0	0	0	0	0
	142	8,466	12,463	12,538	12,538	12,154
	143.01	2,518	3,657	4,001	4,642	4,659
	143.02	2,903	4,870	5,951	6,530	6,537
		13,887	20,990	22,490	23,710	23,350
Sphere of Influence	143.02	22	22	1,336	4,889	9,889
Ft. Ord Portion	141	6,760	13,321	14,014	14,014	14,014
MARINA TOTAL		20,669	34,333	37,840	42,613	47,253
MONTEREY	119	0	0	0	0	0
	125	5,267	6,621	6,774	7,156	7,540
	125.99	11	11	11	11	11
	126	1,898	2,864	3,260	3,260	3,260
	127	2,801	3,368	3,480	3,791	4,048
	128	5,151	6,176	6,259	6,735	7,128
	129	629	829	842	870	907
	130	2,917	3,456	3,519	3,736	3,933
	131	3,085	3,091	3,100	3,100	3,100
	132	870	1,567	1,747	2,111	2,434
	133	4,929	5,775	5,928	6,300	6,706
		27,558	33,758	34,920	37,070	39,067

CITY	CENSUS TRACT	1980 <sup>1</sup>	1990	1995	2000	2005
PACIFIC GROVE	120	3,276	3,480	3,524	3,904	4,006
	121	2,256	2,430	2,488	2,710	2,798
	122	2,981	3,178	3,254	3,563	3,650
	123	2,018	2,165	2,246	2,416	2,493
	124.01	1,990	2,162	2,226	2,389	2,500
	124.02	3,230	3,426	3,592	3,857	3,943
		15,751	16,840	17,330	18,839	19,390
SALINAS	1	6,275	6,962	8,318	8,105	7,969
	2	5,282	5,297	5,102	4,987	4,919
	3	3,749	3,834	3,693	3,610	3,560
	4	4,121	5,545	5,341	5,221	5,149
	5	6,480	7,402	7,130	6,970	6,874
	6	4,428	4,038	3,889	3,803	3,750
	7	7,372	7,259	6,992	6,835	6,742
	8	3,761	3,661	3,527	3,448	3,401
	9	3,760	3,814	3,674	3,590	3,541
	10	438	516	498	486	479
	11	3,145	3,890	3,747	3,662	3,612
	12	3,177	3,869	3,710	3,626	3,557
	13	1,850	3,089	2,975	2,909	2,869
	14	2,570	3,230	3,111	3,041	2,999
	15	5,558	7,128	6,866	6,712	6,619
	16	2,326	2,969	2,860	2,796	2,758
	17	3,216	3,773	3,633	3,552	3,503
	18	2,171	8,176	7,898	7,699	7,593
	105.02	6,041	10,860	11,492	11,234	10,681
	106.01	1,140	2,450	9,921	13,229	13,073
	106.02	3,619	3,928	3,783	3,695	3,640
		80,479	101,689	108,160	109,210	107,310
Sphere of Influence	1	NA	0	3,890	7,486	12,589
	18	NA	937	1,810	1,858	1,833
	106.01	NA	0	0	3,976	12,878
		NA	937	5,700	13,320	27,300
SALINAS CITY TOTAL		80,479	102,627	113,860	122,530	134,610
SAND CITY	140	182	337	623	836	1,057
SEASIDE	135	4,749	5,231	5,254	5,262	5,265
	136	3,109	3,734	3,951	4,165	4,572
	137	2,946	3,377	3,561	3,735	3,904
	138	5,849	6,270	6,295	6,302	6,302
	139	2,447	2,768	2,792	2,808	2,818
	140	1,807	1,940	1,967	1,988	2,009
		20,907	23,320	23,820	24,260	24,870
Ft. Ord Portion	141	15,668	17,139	18,110	18,110	18,110
		36,567	40,459	41,930	42,370	42,980

CITY	TRACT	1980 <sup>1</sup>	1990	1995	2000	2005
SOLEDAD	111	5,928	7,891	8,339	8,520	8,708
Sphere of Influence	111	NA	199	811	811	811
		5,928	8,090	9,150	9,331	9,519
UNINCORPORATED AREA	1	1,889	2,099	2,110	2,116	2,122
	3	0	0	0	0	0
	5	38	42	42	42	42
	10	479	535	540	543	546
	15	110	122	122	122	122
	101	5,362	7,319	8,225	8,932	9,269
	102.01	3,102	3,987	4,282	4,636	5,042
	102.02	3,307	4,352	4,623	4,984	5,224
	103.01	8,517	11,295	12,416	13,233	13,614
	103.02	1,651	1,882	1,905	1,911	1,916
	104	4,396	5,177	5,446	5,812	6,264
	105.01	4,927	6,445	10,067	11,402	14,619
	105.02	941	1,051	1,068	1,065	1,070
	106.01	2,774	2,521	2,528	2,574	2,643
	106.02	121	134	131	131	131
	107	6,423	8,720	9,298	9,983	10,156
	108	3,636	4,418	4,688	5,020	5,406
	109	2,932	3,640	3,640	3,640	3,640
	110	4,725	5,728	5,917	6,179	6,463
	111	1,663	2,114	2,210	2,346	2,513
	112	1,673	1,917	1,945	1,976	2,009
	113	2,693	2,842	3,138	3,398	3,720
	114.01	2,765	3,474	3,575	3,765	4,021
	114.02	832	1,074	1,074	1,074	1,074
	115	1,271	1,541	1,573	1,632	1,708
	116	6,483	7,535	7,683	7,903	8,113
	117	4,608	5,269	5,365	5,446	5,531
	118	0	0	0	0	0
	119	5,036	5,922	6,322	6,834	7,109
	124	171	180	181	182	186
	126	0	0	0	0	0
	128	38	38	38	38	38
	131	0	0	0	0	0
	132	1,326	1,701	2,083	2,329	2,629
	133	0	0	0	0	0
	143.01	3	3	3	3	3
	142.02	22	22	22	22	22
		83,914	103,095	112,251	119,269	126,963
COUNTY TOTAL		290,444	367,590	400,500	428,100	457,700

<sup>1</sup>1980 Census



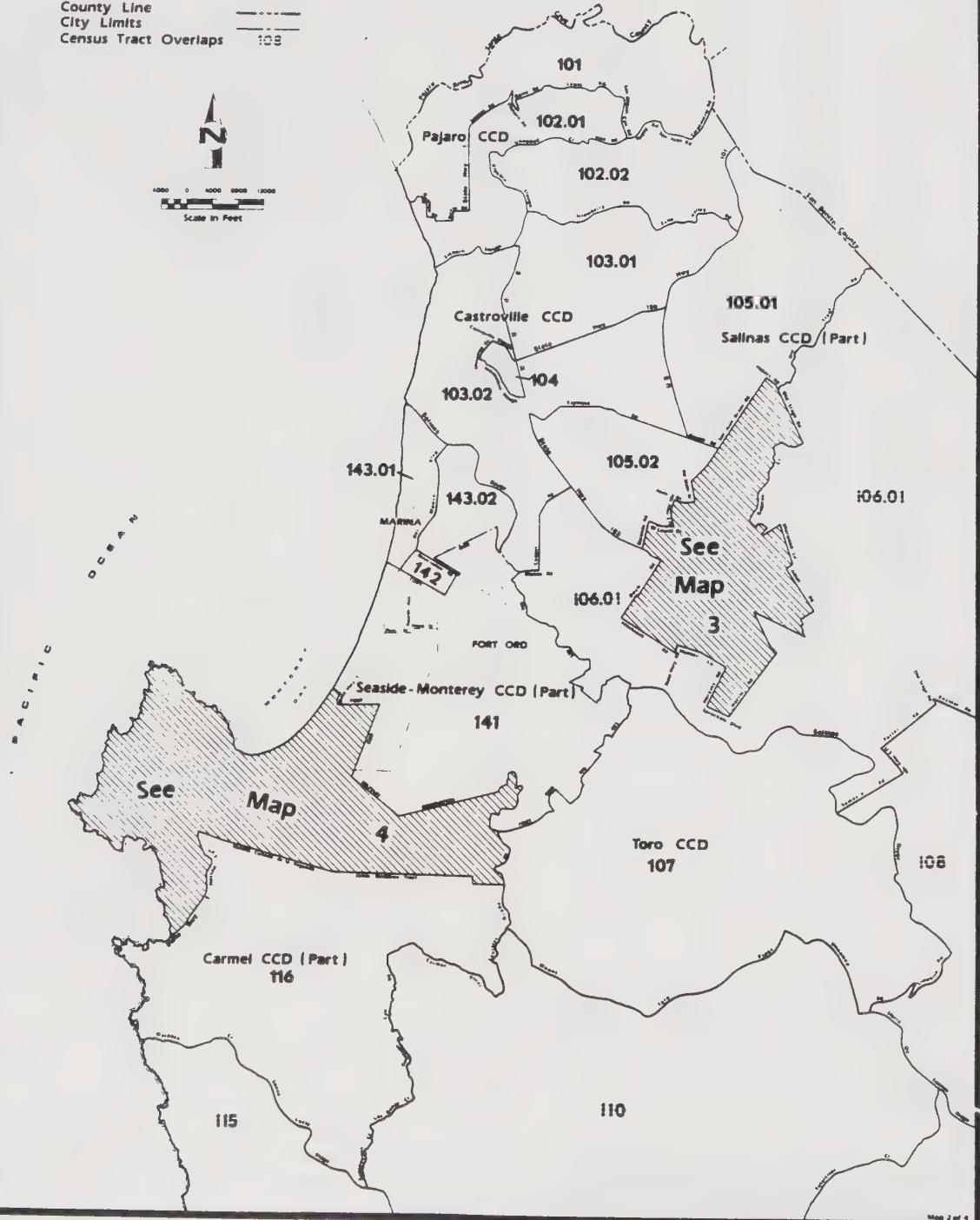
Source: Monterey County Planning Department

## 1980 CENSUS TRACTS

Salinas - Seaside - Monterey, Ca. SMSA  
(Coextensive with Monterey County Ca.)  
Map 2, Northern Portion of Monterey County  
Census County Division (CCD)

### Census Tract Boundaries:

Census Tracts \_\_\_\_\_  
County Line \_\_\_\_\_  
City Limits \_\_\_\_\_  
Census Tract Overlaps 103



Source: Monterey County Planning Department

## 1980 CENSUS TRACTS

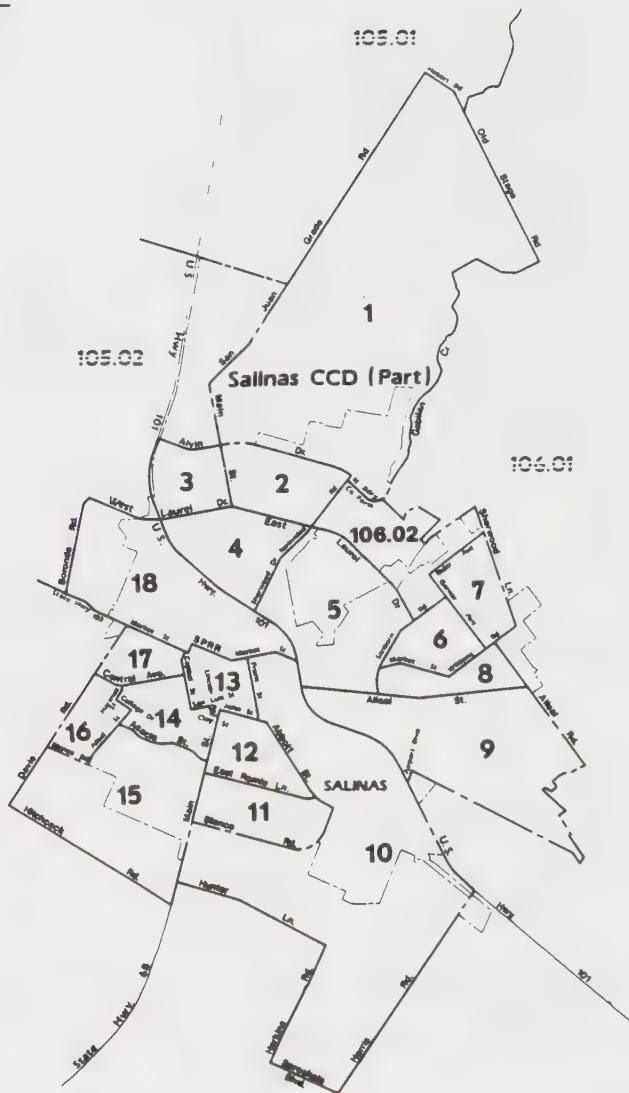
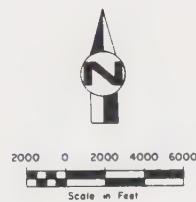
Salinas - Seaside - Monterey, Ca. SMSA  
 (Coextensive with Monterey County Ca.)  
 Map 3, Salinas and Vicinity  
 Census County Division (CCD)

### Census Tract Boundaries:

Census Tracts

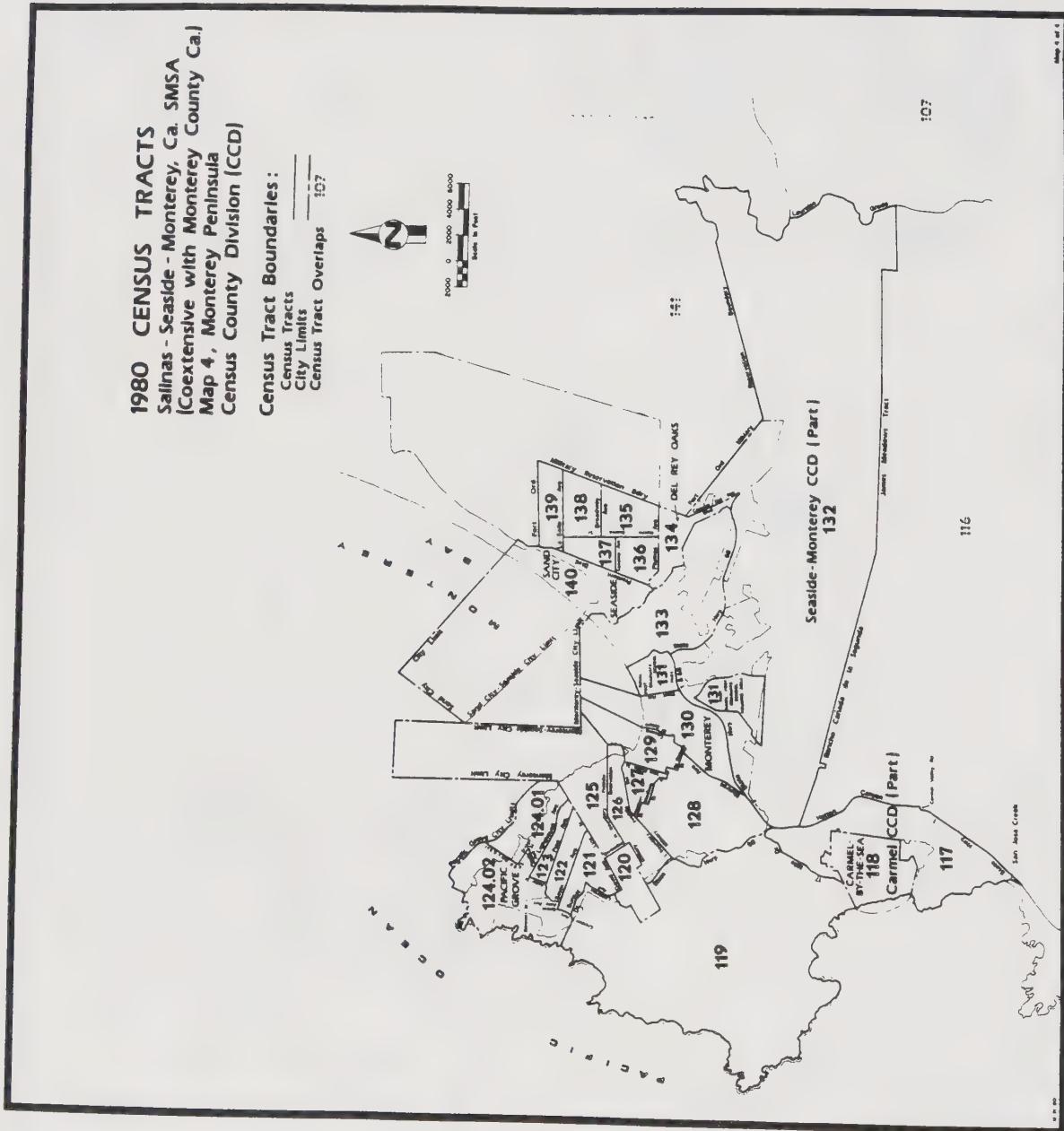
City Limits

Census Tract Overlaps 106.01



Map 3 of 4

Source: Monterey County Planning Department



grow beyond the current sphere of influence boundaries. However, absent clear general plan policies on expansion beyond the existing sphere, the forecast was held to levels which could be accommodated by the current city limits and sphere of influence: 6,020. Unconstrained by the current sphere of influence the population would rise to 7,120.

### **City of Greenfield**

The City of Greenfield is in the same situation described above for the City of Gonzales; current rates of growth suggest that both the city limits and sphere of influence will be builtout by the year 2000. As a result, the forecast population for the city has been limited to 8,488 in 2005. However, unconstrained by the current sphere of influence the population would rise to 9,110.

### **City of King**

The forecast for the City of King was prepared using the general methodology described above. Included within its sphere of influence is Pine Canyon

### **City of Marina**

The population forecast for areas within the City of Marina city limits was prepared using the general methodology described above.

Forecasts for areas of Ft. Ord within city limits have been prepared based on the five year facility plan for the base. Forecasts for Armstrong Ranch in the Marina sphere of influence, the City of Salinas sphere of influence and Rancho San Juan were all decreased to bring them in line with the total population forecast for Monterey County.

### **City of Monterey**

The population forecast for areas within the City of Monterey has been prepared using the general methodology described above.

### **City of Pacific Grove**

The population forecast for areas within the City of Pacific Grove has been prepared using the general methodology described above.

### **City of Salinas**

The population forecast for areas within the City of Salinas, and city sphere of influence has been prepared using the general methodology described above. The forecasts for the sphere of influence, Marina sphere of influence and Rancho San Juan in the unincorporated area of Monterey County were reduced to bring them in line with the total population forecast for Monterey County. The forecast was approved for use by the Salinas City Council.

### **City of Sand**

The population forecast for areas within the City of Sand has been prepared using the general methodology described above.

### **City of Seaside**

The population forecast for areas within the City of Seaside has been prepared using the general methodology described above. In addition, forecasts for Ft. Ord areas within city limits were prepared based on the five year facility plan for the base.

### **City of Soledad**

The population forecast for areas within the City of Soledad have been prepared using the general methodology described above. However, given

current rates of growth it is apparent that lands within the city and sphere of influence will be builtout by 1995 with additional population increases coming only as a result of increases in household size. Both AMBAG and city staff believe that the city will continue to grow beyond the current sphere of influence boundaries.

However, absent clear general plan policies on expansion beyond the existing sphere, the forecast was held to levels which could be accommodated by the current city limits and sphere of influence: 9,519. Unconstrained by the current sphere of influence the population would rise to 11,310.

### **Unincorporated Areas**

The population forecasts for the unincorporated areas of Monterey County were prepared using the general methodology described above. Due to the large area and diversity of use and development the base data for the forecast were the Tax Assessors Data for each parcel. The results for each area were checked with Monterey County Planning staff. The results were reviewed and approved by the Monterey County Board of Supervisors. The population forecasts for Rancho San Juan in the unincorporated area, sphere of influence for Marina and sphere of influence for Salinas were all reduced to bring them in line with the total population forecast for Monterey County.





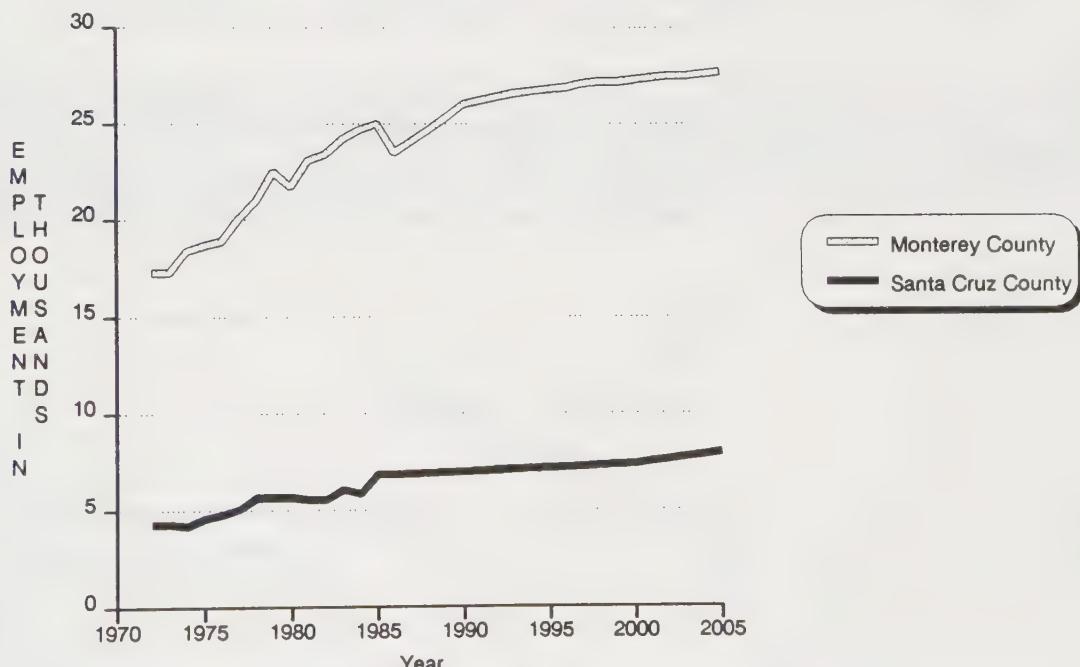
# Appendix

The following graphs depict the historical and forecast data by industry for both Monterey and Santa Cruz County. The Source of the historical data is the Annual Planning Information

Report: 86-87 for Salinas-Seaside-Monterey MSA and Santa Cruz MSA. Historical data are for the years 1972 to 1986. AMBAG forecast data for years 1987 - 2005.

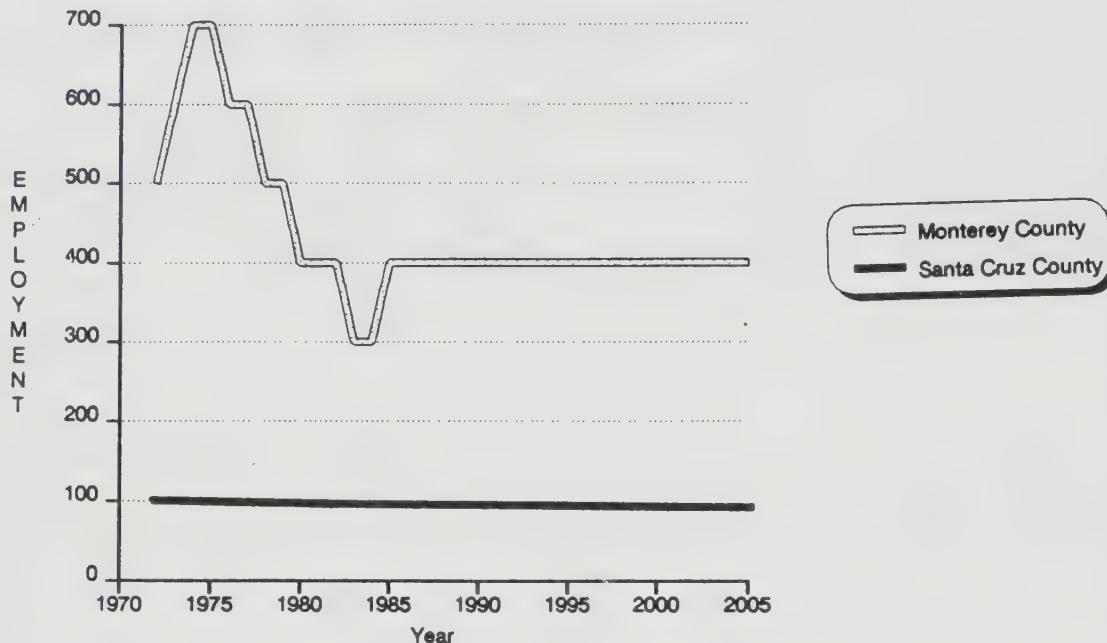
## Chart A-1

### Agricultural Employment: Historical and Forecast



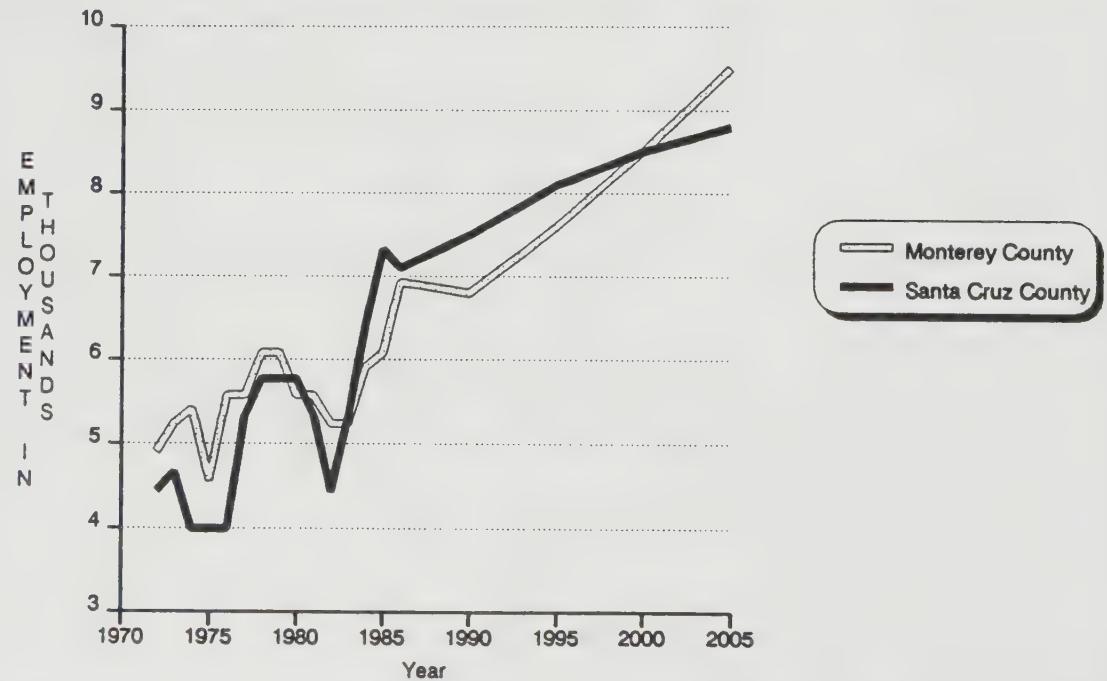
## Chart A-2

### Mining Employment: Historical and Forecast



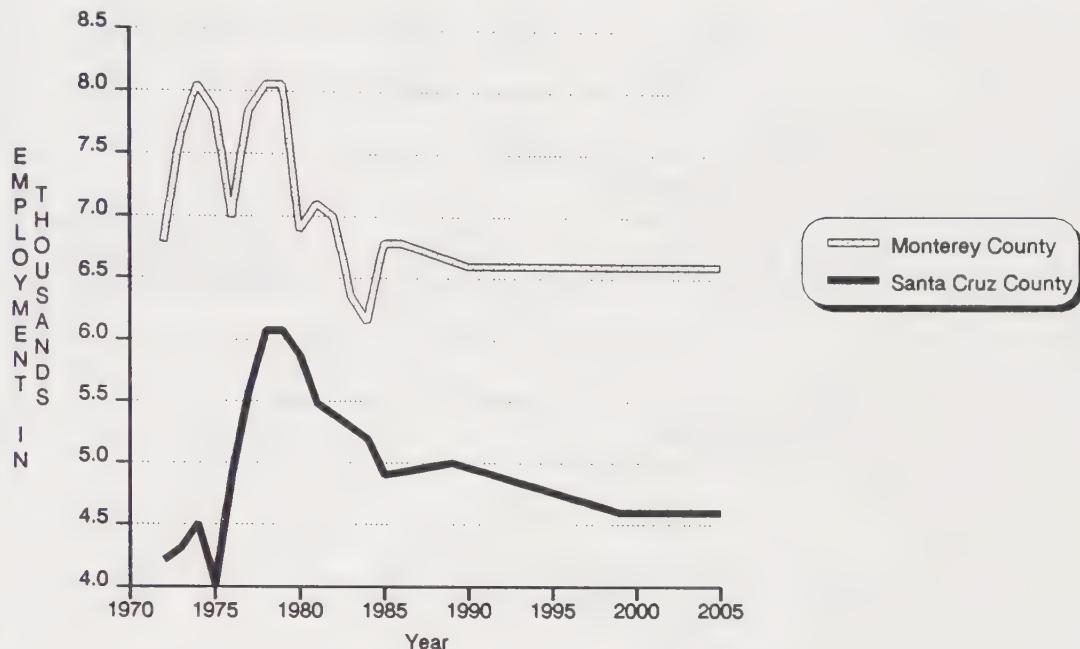
## Chart A-3

### Construction Employment: Historical and Forecast



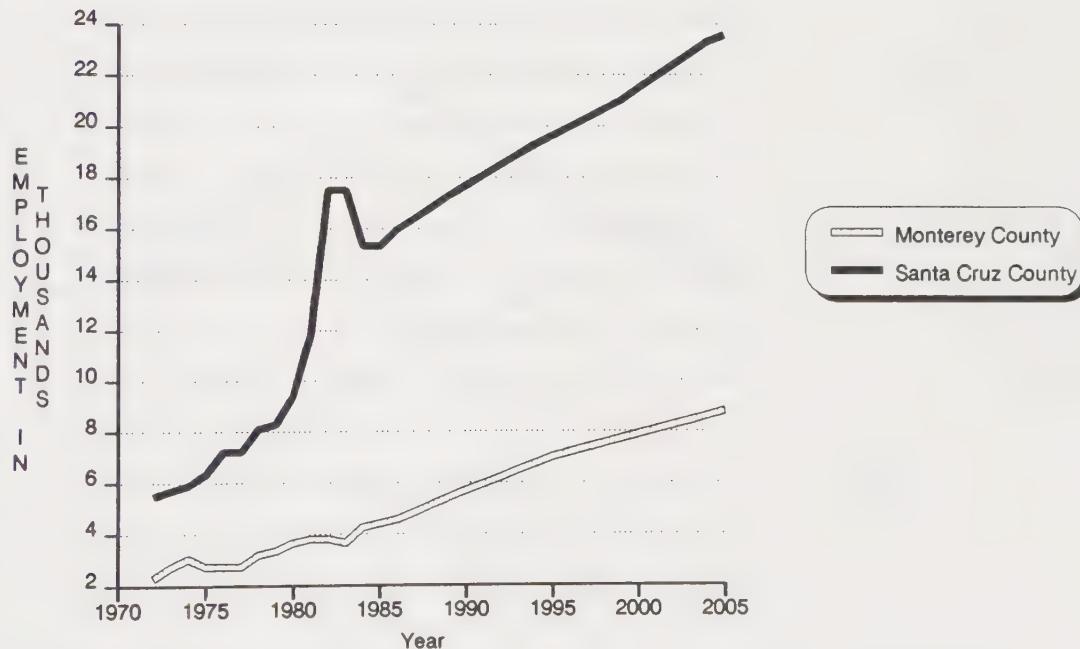
## Chart A-4

### Nondurable Goods Manufacturing Employment: Historical and Forecast



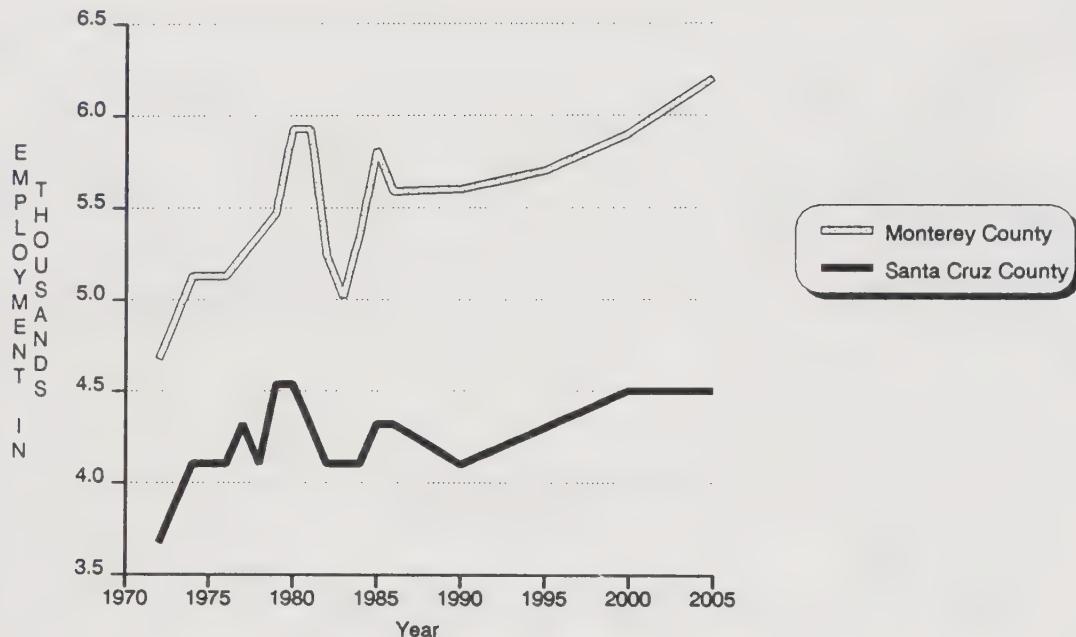
## Chart A-5

### Durable Goods Manufacturing Employment: Historical and Forecast



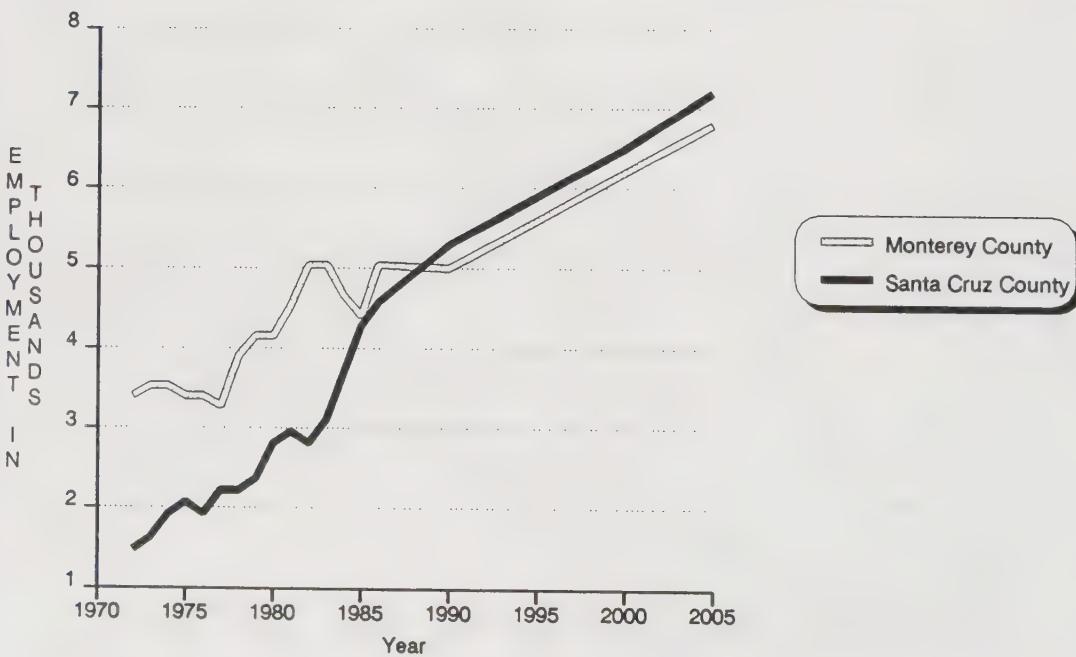
## Chart A-6

### Transportation and Public Utilities Employment: Historical and Forecast



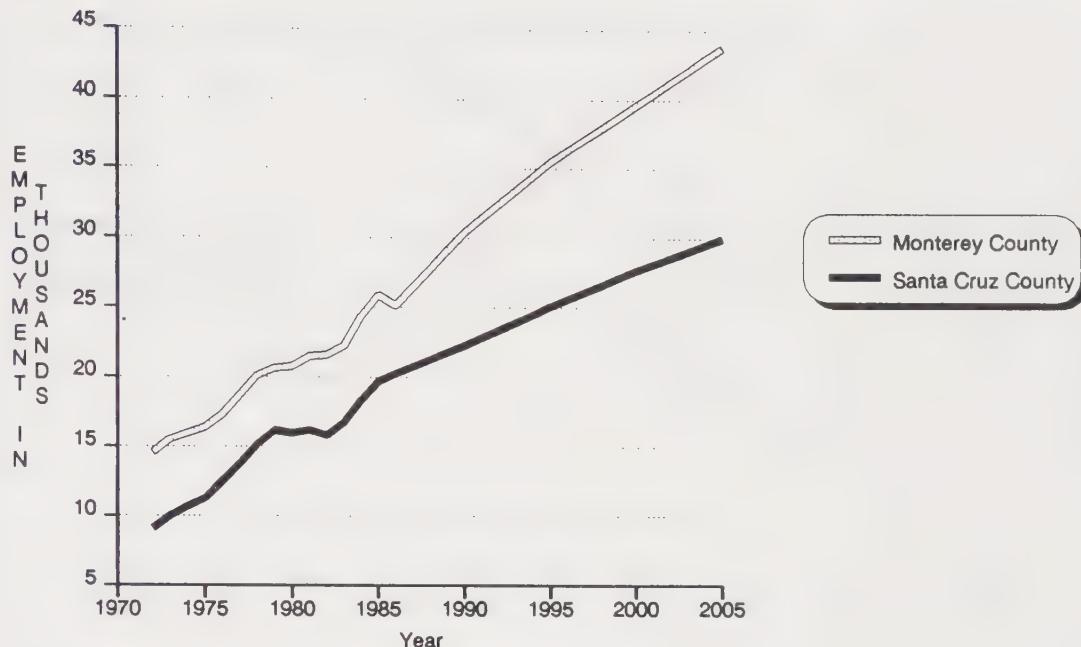
## Chart A-7

### Wholesale Trade Employment: Historical and Forecast



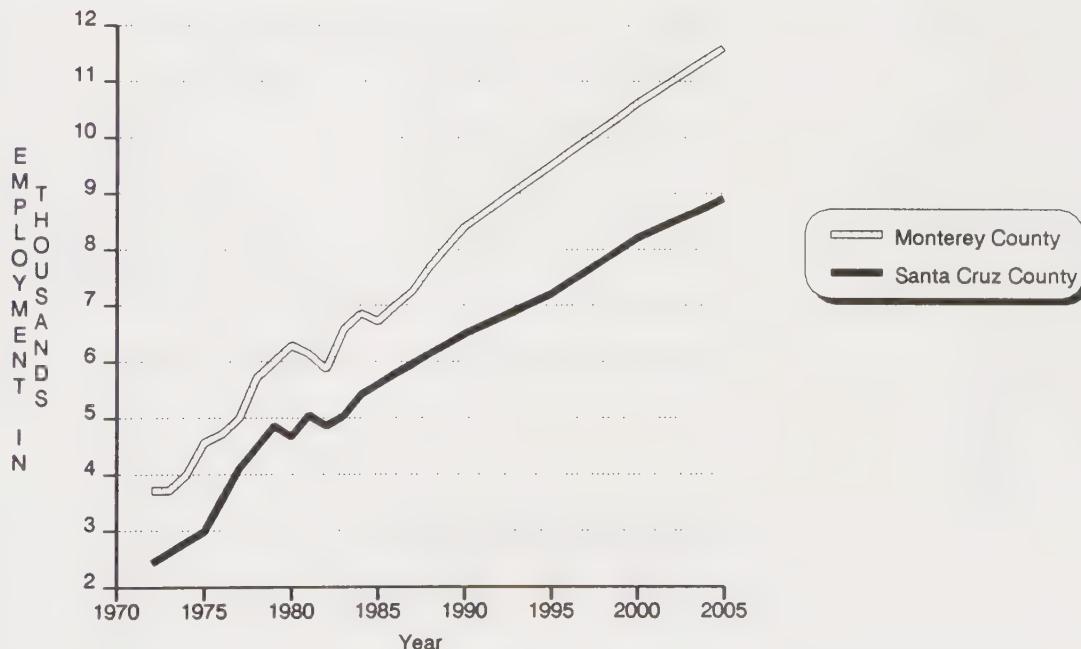
## Chart A-8

### Retail Trade Employment: Historical and Forecast



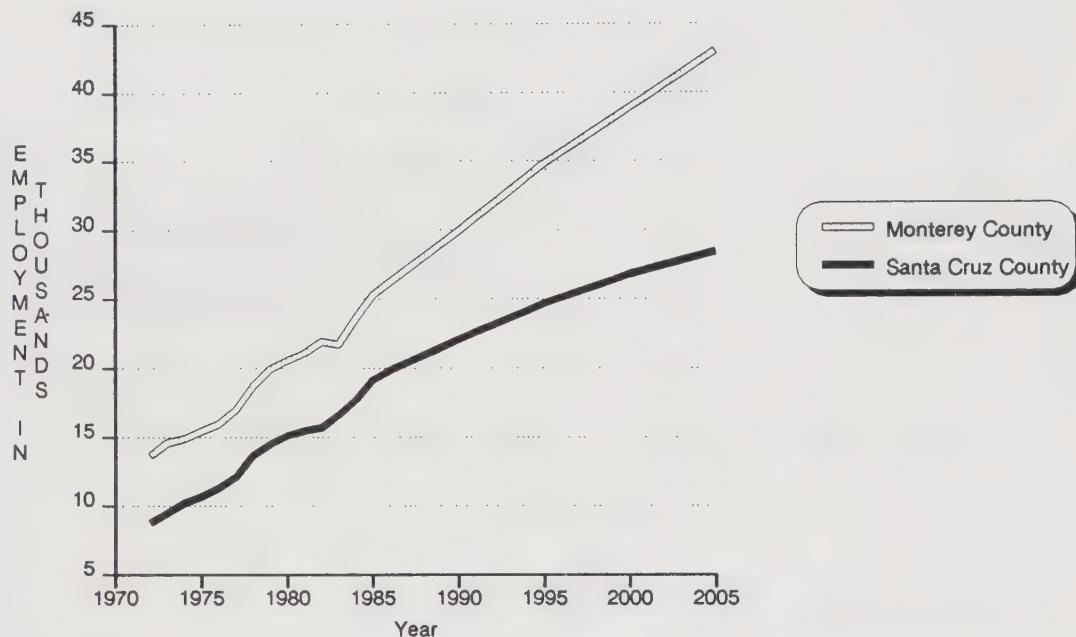
## Chart A-9

### Finance, Insurance and Real Estate Employment: Historical and Forecast



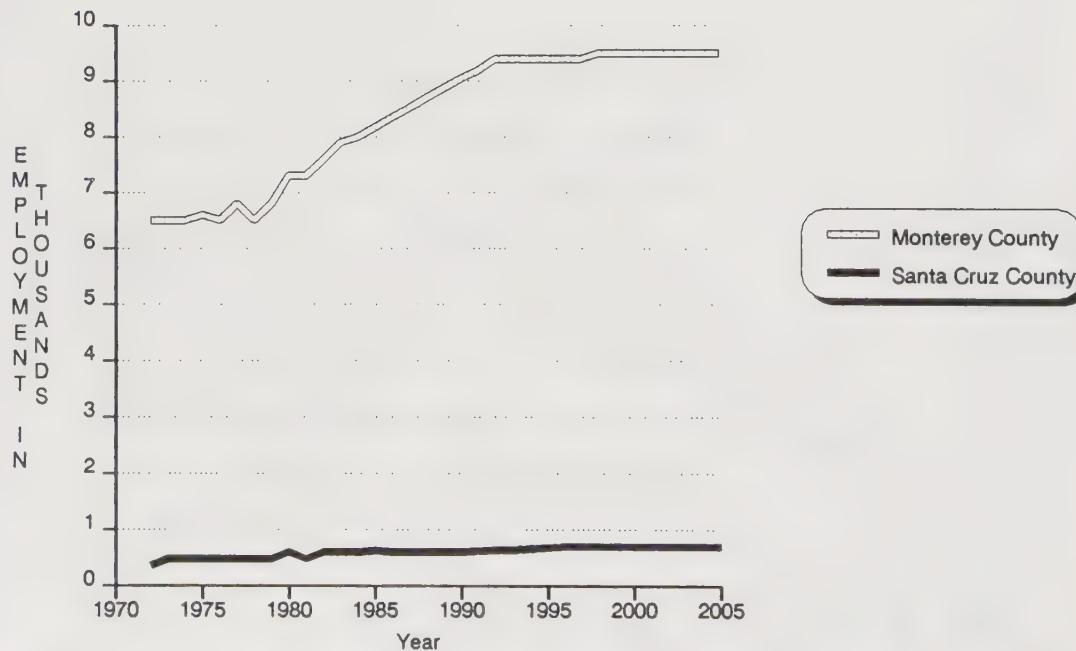
## Chart A-10

### Service Employment: Historical and Forecast



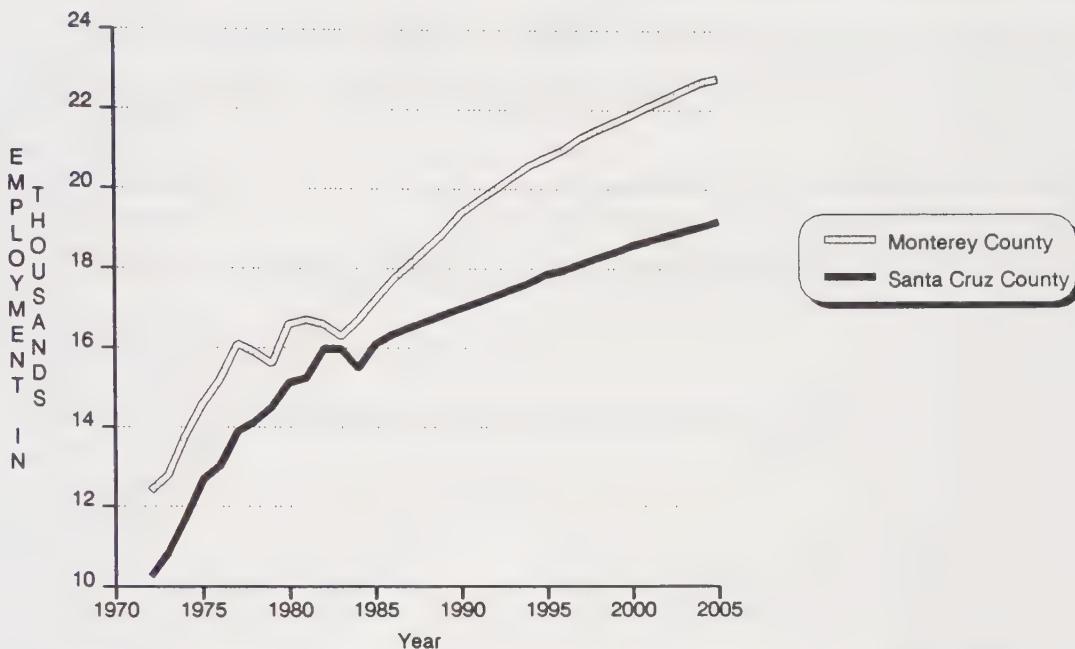
## Chart A-11

### Federal Government Employment: Historical and Forecast



# Chart A-12

## State and Local Government Employment: Historical and Forecast



## Population and Employment Forecast Technical Advisory Committees

AMBAG would like to express its appreciation to the following individuals and organizations for their efforts as part of the Technical Advisory Committees for the Population and Employment Forecast.

### Employment Technical Advisory Committee - Monterey County

Ed Angstadt	California Grower-Shipper Vegetable Association
Larry Bagley	City of Marina
Don Bates	City of King
Berkeley H. Brannon	City of Gonzales
Eugene Cabaluna	Monterey County
Peter Chamberlin	City of Sand
Jim Cook	Monterey County Local Agency Formation Comission
Denise Cowdrey	Salinas Board of Realtors
Jeffery Dack	City of Marina
Ernest Franco	City of Seaside
Philip Kohlenberg	EDD Employment Data & Research
Ray Lamb	Monterey County
Charles Lerable	City of Salinas
Tony Lobay	City of Pacific Grove
Thomas McClean	National Electrical Contractors
Jean McCollister	Salinas Chamber of Commerce
Sheryl McKenzie	Monterey Board of Realtors
Chuck Milazzo	First National Bank
Haywood Norton	City of Monterey
Joan Pease	Monterey Peninsula Chamber of Commerce
Tom Peterson	Department of Defense
Bonnie Proctor	Bank of America
Paul Richards	City of Greenfield
Jorge J. Rifa	City of Soledad
Brian Roseth	City of Carmel
Keith Woodcock	City of Soledad

Additional input was solicited from the following:

Tim Daniels	Daniels & House Construction
Paul Davis	Economic Development Corporation
Tony Durante	PG & E
Norris Seal	Pacific Bell
Brian Shaw	Marina Chamber of Commerce

### Employment Technical Advisory Committee - Santa Cruz County

Tom Brezsney	Santa Cruz Area Restaurant Association
Tom Burns	County of Santa Cruz
August Caires	City of Scotts Valley
Leonard Craft	Agricultural Commissioner
Pat Dellin	City of Watsonville
Karen Dixon	University of California
Reed Flocks	Sierra Club
Mary Hammer	Resource Defense Fund
Bob Hanna	City of Scotts Valley
Pat McCormick	Santa Cruz County Local Agency Formation Comission

Bonnie R. Proctor	Bank of America
Celia Scott-Von der Muhl	Resource Defense Fund
Susan Tupper	City of Capitola
Donna White	Santa Cruz Board of Realtors
Roger Wong	Pajaro Valley Unified School District

Additional input was solicited from the following:

Thomas R. Am Rhein	Santa Cruz County Farm Bureau
Steve Barnes	Santa Cruz County Builders Exchange
David Bower	Pacific Bell
Tony Durante	PG & E
Dale Kinsley	Santa Cruz Unified School District
John Prieskorn	San Lorenzo Valley Unified School District

#### Population Forecast Technical Advisory Committee - Monterey County

Don Bates	City of King
Berkley Brannon	City of Gonzales
Peter Chamberlin	City of Sand
Jim Cook	Monterey County Local Agency Formation Comission
Denise Cowdrey	Salinas Board of Realtors
Jeffery Dack	City of Marina
Ernest Franco	City of Seaside
Tony Lobay	City of Pacific Grove
Thomas McClean	National Electrical Contractors
Sheryl McKenzie	Monterey Board of Realtors
Hardy Nielsen	City of Salinas
Tom Peterson	Department of Defense
Paul Richards	City of Greenfield
Brian Roseth	City of Carmel
Keith Woodcock	City of Soledad

Additional input was solicited from the following:

Mary Heim	Department of Finance
David Wright	Mid-Coast Health Systems Agency

#### Population Forecast Technical Advisory Committee - Santa Cruz County

Graham Bice	University of California
Tom Burns	County of Santa Cruz
August Caires	City of Scotts Valley
Charlie Eadie	City of Santa Cruz
Reed Flocks	Sierra Club
Mary Hammer	Resource Defense Fund
Mary James	County of Santa Cruz
Pat McCormick	Santa Cruz County Local Agency Formation Comission
Larry Pearson	City of Santa Cruz
Bill Raffo	City of Santa Cruz
Celia Scott-Von der Muhl	Resource Defense Fund
Donna White	Santa Cruz Board of Realtors
Linda Wilshusen	Santa Cruz County Transportation Comission
Roger Wong	Pajaro Valley Unified School District

Additional input was solicited from the following:

Mary Heim	Department of Finance
David Wright	Mid-Coast Health Systems Agency



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